

YORK STATE
RURAL
PROBLEMS
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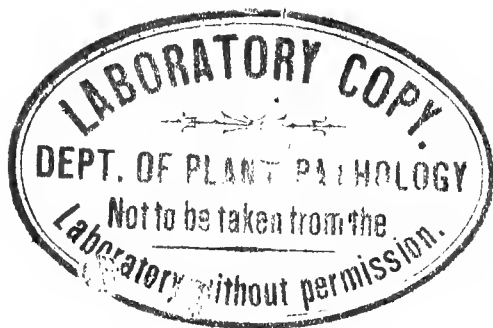
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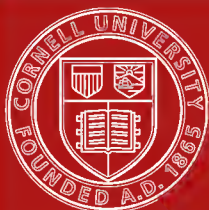
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YORK STATE RURAL PROBLEMS

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By

L. H. BAILEY

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YORK STATE RURAL PROBLEMS

I

THE YOUNG FARMER WHO GOES FORTH

To a group of students who desired a point of view

THE young farmer should feel that he is going into his business armed with the courage of science, the tools of invention, and the resourcefulness of education. He is going with the purpose to win. He will take account of all the conditions, advantageous and disadvantageous. He will choose his farm with an understanding of the elements of failure and success. He will make a physical valuation of the property. He will lay out a farm scheme. He will plan to safeguard the fertility of the land. He will project ways whereby he may articulate his farming with the life of the community. He will be humble in his opinions and teachable by his fellows; but, if he has the right stuff in him, he will also carry the spirit of challenge and he will meet his situation with the determination of a man. Every farm is a problem.

II

WHERE TO TAKE HOLD

Letter to a city boy who would be a farmer

I CANNOT take the responsibility of advising you to be a farmer, or of influencing your parents to that end, or of advising you to go to an agricultural college, for I do not know whether you are of the farmer kind.

Persons who have been reared far from the soil are likely to look at the question without a proper understanding or appreciation of all the elements involved. Many of our city people secure their notions of agriculture and country life merely by reading books, by public lectures, by exhibitions at land-shows, and the like. They are likely to think that they are qualified to be farmers because they love nature, but a love of nature is only one of the many assets of a good farmer; and, moreover, I suspect that much of the supposed love of nature is only an interest in things that are different from the objects in the city. A person may love nature and yet miserably fail at farming. Other per-

sons desire to take up farming because they are dissatisfied with their present condition, but this is really no reason for the choice. Nor are you to suppose that society calls you to go to the country either to relieve the congestion of the city or to raise more products to reduce the cost of living. Your simple problem is to determine whether you have the making of a farmer.

Usually the city boy has had so much access to amusement and entertainment and has grown up with so many physical conveniences and with so much service, public and private, at his command, that he finds it difficult to adapt himself to the different order of things on the farm. The road from the farm to the city is easier than the road from the city to the farm. I do not wish to discourage you from going into farming, for it is a laudable ambition; but I want you to be well informed.

My suggestion is that you go on a real farm and work there for a year. I do not mean that you become a boarder or a visitor, or that you spend a vacation in the country, but that you be a part of the farm enterprise for a good twelvemonth. This will determine your mind for you; and you will know then whether you

want to be a farmer. You should begin at the farm end, not at the college end. Having determined whether you want to be a farmer, and having acquired first-hand knowledge of representative agricultural conditions, you may then very profitably supplement your experience by a school or a college course.

I should give similar advice if you were thinking of making a mechanic or a merchant of yourself,—you should settle your mind by personal experience and you should learn the trade or the business by engaging in it.

All I can say is that there are good opportunities in farming. You must see for yourself what these opportunities are, and also see the disadvantages. My advice is to stop consulting the library and reading magazines and attending lectures, until you know what farming is; then come back to me at the end of the year and perhaps I can help you.

III

THE NEED OF CONTACT-WORK IN COUNTRY-LIFE AFFAIRS

Extract from address to students and staff of Michigan Agricultural College, Dec. 11, 1912

ALL good country-life progress lies at bottom in the relations between man and man; and it is only as we realize this fact and act on it that the spirit of our work can be such as will accomplish the most good.

The difficulty with much of our country-life effort is that we try to work it out impersonally by projecting overhead organizations. We seem to think that if we have a scheme or plan, a set of officers, and then perhaps a law, we have accomplished everything needful. But it is easy to over-organize. It is necessary to begin far back of this, with the plain personal human relations. An "organization" may be the last thing needed rather than the first thing.

RURAL CREDIT AS AN ILLUSTRATION

Discussion of rural credit, land banks, agricultural paper, and similar financial questions,

is now much in the public prints. The farmers are more or less interested in it. There is much publicity of European credit systems.

Assuredly we need a new understanding of agricultural credit. We need the information that comes from a study of European experience. We shall want all relevant facts, both abroad and at home, to aid the processes of re-direction. But we may not need to import or to implant an overhead system.

Banking and credit rest directly on confidence, and sympathy between man and man. The banker and farmer often have not been close enough together, not close enough for the most satisfactory business relations to either party. The part now to be taken is to bring them together as persons and neighbors to discuss their common problems. The situation in some regions seems to lack both understanding and fellowship. There are institutions enough that can bring them together on common grounds. The banker will learn what the farmer needs, he will gain instruction in farm conditions and values; and he will build over the bank offices so that no gratings or barriers will stand between the consulting officer and his customer, and the two will sit together at an open desk or table for consultation on equal

terms. The farmer will learn that the banker means to be fair, and that he is approachable and interested in the best development of the rural community. They will draw together in sympathy, and they will trade together on mutually advantageous conditions.

The existing credit institutions and organizations will attempt to meet the situations for the localities, when the needs are made plain and personal relations are established. One plan will be tried here and another there. Deficiencies may need to be remedied by legislation or they may not; laws to regulate voluntary cooperative credit may be necessary; and if it turns out that the present agencies are unadaptable, we may take such action as experience may suggest. If anything like a national or broadside system is necessary, it should develop out of experience, as systems have developed in some other countries. We need American experience in an effort at readjustment before we construct an American system. We should begin at the American end of the problem.

We should find out just what the farmers actually need over a series of years and determine the exact facts as to conditions; and this requires careful study. If credit is to be really cooperative,

the movement must lie very close to the people; and if it is primarily for the benefit of farmers, they should have an active part in the actual discussion. Who knows but that we may have institutions and agencies enough and flexible enough to meet the needs of rural credit, in such regions and cases as seem now not to be adequately served? At all events, the moral effect of the purpose to develop the resources of the communities, rather than to impose ready-made systems from above, is worth while to keep and to emphasize in all rural work, particularly in the beginnings of movements.

Cooperative credit specially needs to be undertaken carefully. It must be developed rather than established; it must grow up. Experience in cooperating is necessary. Credit organizations that are really cooperational are societies rather than banks. Of course cooperative credit is only one form of credit.

We must come together face to face in little groups wherever any deficiency is said to exist. This is the secret of cooperation; and it is also the way of the best human progress. It has been the way of the great teachers.

IV

PERSONAL SKILL IN FARMING

*Agricultural Assembly, College of Agriculture,
Dec. 5, 1912*

THE farmer produces the raw materials. He has had only limited occasion to develop skill in manufacture and manipulation. The new dairying, whereby much machinery is used and a refined product is produced, has established new conceptions in farm methods. A piece of rock may be worth no more than the cost of the labor in quarrying it and of transporting it. If one were to make a hitching-post of it, the value of the stone would be much increased because human effort and skill had been added to it. If it were made into a lintel or the capital of a column, its value would be still further increased; and if an artist were to touch it into life as a statue, its value would be many thousand times greater than that of the rock as it lay in its bed. In a new country, wood is an incumbrance on the land. Later it may be sold as stove-wood. In time, it is in demand as material for the expression of

many handicrafts and it becomes furniture and cabinet-work and its value is greatly increased. In the hands of a wood-carver, the piece of timber that on the frontier would be worth less than nothing may be worth thousands of dollars. The additional value is created by the human skill that has been applied to it. We buy back from the Old World articles that are fabricated from our own raw materials, skill having been added to them in the process. Similarly, the farmer takes his raw produce to the mill or the shop, and receives back a product of increased value.

The people have not yet learned to pay for skill in farm products. They pay for skill in cigars, champagne, and in many luxuries. They think of farm products even yet as the result of unskilled labor and largely as raw materials. The natural result of putting more skill into agricultural work is that the products of this skill will demand a greater price. I do not look for reduction in the producing-cost of the best agricultural products except incidentally here and there.

The trained farmer places his skill directly in competition on a free and open basis with the skill of every other intelligent farmer. This ought to quicken all his endeavor. The emulation between men is one of the best educators. It is a

question whether a prohibitive tariff increases the skill of a people. If it does not, it fails on moral grounds. A high tariff is usually defended or attacked on cost-of-products grounds, but this may not be the most significant phase of the subject.

The greater the development of skill in the members of the agricultural community, the greater will be the producing-power of an individual worker. Not so many persons will be required to secure the same result in products. One of the contributions of agriculture to human welfare is that with the rise of skill in rural pursuits more men are released from the farms to engage in the trades, industries, and professions. Of course, there will be place in the open country for many more people than are now there, but we are not to expect the proportion of farmers to the whole population to increase permanently. It probably will still further decrease. The present notion that vast numbers of additional men are needed on the farms is fallacious.

With the necessary differentiation in our population the skilled man, whether in farming or elsewhere, will constantly become a more important man and will be marked in his community and in affairs. Probably nowhere is the skilled man now more marked than in agricultural pursuits.

Students in a college of agriculture are expected to develop skillful methods and to have as much pride in their materials as the artisan, the engineer, or the artist, have in their materials. Not only is this essential from the economic side, but it must be remembered that a man builds his life with the materials with which he works, whether his materials are metals, books, machines, buildings, cases in courts of law, wheat, cabbages or fowls. One should have as much pride in his material if he is a farmer as if he were producing the best products in metal or in wood or composing a treatise or writing a poem.

We have been selling our raw materials to Europe. This means that we have been selling our potash, phosphoric acid and nitrogen. The wastes of these materials have been valuable for enriching the lands of the Old World. Business organizations are apprehensive that we will lose our export trade in the raw materials. It will be a good thing to keep our fertility at home, to consume largely our own stuffs, to develop more skill in manufacture, put more individuality into our agricultural work, and to exercise more care; and this will have a marked effect on the temper of rural life. More and more we must sell our skill rather than gross raw products.

V

MANUAL-TRAINING BY MEANS OF AGRICULTURE

State Teachers' Association, Buffalo, Nov. 26, 1912

NOW that the interest in agricultural education is so widespread, it is essential that we consider some of the underlying or background problems.

The education of the young should be founded in personal experience and not alone in formal school work. In years gone by, the child and youth acquired personal experience in the domestic duties of the home, in working on farms and in shops, and in many other ways. The social, economic and domestic relations have now so much changed that the child is not likely to be a real cooperator and partaker in the responsibilities of home and work. This change is not marked on the farm, however, and for this reason the farm youth has the advantage of a start in life that is worth more than any exclusive book training. In the old days, the "book-learning" of the schools was a supplement and complement

to the active hand-work of the home. This hand-work having now been eliminated to a large extent, the school work does not have the proper foundation, with the result that it often remains exotic.

The schools are now making an effort, with more or less success, to meet the home deficiencies. Various plans of manual work and training are established. In the so-called manual arts and mechanics, this development has taken place most effectively. It has not yet developed to any extent in the utilization of agricultural labor and occupation.

I wish it were possible that no youth were ever allowed to graduate from a high-school until he had performed real and useful manual labor over a considerable period of time. Such experience would ripen him. I wish that this might be as true of the training of girls as of boys. If this were a condition of high-school work, it would be equally a condition of college work. I know that this is not possible; but I think we may well set it before ourselves as an ideal and endeavor to reach it as nearly as possible by substituting institutional work for the lack of home work.

Of course such substitution cannot produce as genuine results in a given length of time as real labor in the home and with the parents, but it

would be a vast improvement over the present method of allowing the boy and the girl to go through all the grades of the public school and then through college and perhaps even to graduate studies without ever having had any useful occupational experience in life. Every person in the world ought to be able to do something with his hands as well as with his head.

The colleges and schools of agriculture are now confronted with very serious problems touching the qualifications of those who enter the institutions. Many of their students are coming from the cities and towns without any practical experience of farm life or any personal knowledge of the rural background. One cannot secure this knowledge or experience by reading about it or dreaming of it. He must actually have been a part of a country community in order to understand the situation. It is impossible, however, to impose a general entrance requirement in farm practice, because no public way is provided whereby this experience can be gained if one is not brought up on a farm.

If a college imposes an entrance requirement of mathematics, the candidate has an opportunity in the public schools to secure his preparation in that subject. The same is true in history, language,

and sciences. It is not true in the manual experience that one needs just as much before he enters college.

A certain number of town boys can find employment on farms, but the opportunities in this direction are not sufficient to meet the necessity or the demand. Most farmers do not want city boys. I have many times appealed to farmers that they owe a duty to the community to take pains to teach young men who may come to them for instruction, considering the young man to be a pupil and paying him what his labor is worth, or charging him for instruction if he earns nothing and in addition for the cost of any damage that he may do. The number of farmers who are in position and able to do this is limited. Many city youths are adaptable and make excellent farm help; but all inexperienced youth should be looked on as learners. Herein is a relationship that needs adjustment. In some way, society must provide the means whereby some of this needful experience may be gained, if society is to maintain schools and colleges for agricultural education. (Consult Problem XXIII for a fuller discussion of this subject.)

The State of New York has now undertaken to maintain advanced education in agriculture by the

establishment of a State college and several schools. It should now go back to the beginning and provide the preparatory agencies. The first essential is to make it possible and practicable for the public schools to introduce agricultural subjects on similar terms with other subjects; and this is now being actively and I think effectively undertaken. If the State is to provide the best complete enterprise, the next most important need is some kind of direct training-school opportunity in agriculture for those who would be farmers or who would pursue an education by means of agriculture. Apparently, some of the European countries have distanced us here.

These manual and training-schools may be connected with existing public schools or they may be separate units, but I think that they all should be very closely connected with the State education policy and not form a duplicate system. By eliminating the purposeless long vacation and maintaining a twelve months' enterprise, such training-schools or groups might be combined with the existing public schools without loss of time to the pupil. These training-groups should be many, to meet the needs of the different localities. They should be small units and strictly limited in the number of pupils so that each pupil may receive

the maximum of actual hand training. The course of study should be a training-school method and not a copy of existing school work,—of course I am thinking of training in farm practice and not of the training of teachers. If these practical training-schools or classes were to utilize actual farmers' farms for a part of their work the results, of course, would be much better. A vacation in the country is not farm work. Living in a country home is not farm work. One must actually do the work seriously and as good farmers do it. There should be some way of linking-up many of the best farms with the training-school idea, the educational features to be under the direction of the recognized educational authorities of the State.

Society should take such action as will prepare the children to go to school.

VI

THE LOOK COUNTRY-WARD

*Freshman Debate Club, Cornell University,
Nov. 5, 1910*

THERE is now a strong back-to-the-land sentiment. Our mail is full of correspondence asking for advice as to the opportunities for men to make headway in the country districts. There is no simple or satisfactory answer to these questions. Whether a man will find what he wants in the open country will depend largely on what he is looking for; and whether he succeeds will now depend mostly on his adaptabilities.

We have been living in a get-rich-quick age. Persons have wanted to make fortunes. Our business enterprises are organized with that end in view. The back-to-the-land feeling is to some extent a reaction from this idea. Persons are asking how they may live a satisfactory life, rather than to place the whole emphasis on the financial turnover of a business.

There are several reasons why the back-to-the-land agitation is now gaining headway: because

cities are overfull and people desire to escape; because it is now possible for a person to make a good living on the land, whereas formerly it was possible only in exceptional cases or when a man was living on the capital accumulated on the farm through more than one generation of owners; because there is a strong reaction against depending for support on the will of another person or on that of a corporation; because there is a general soul-movement from the complexities of city life and industrialism to the relative simplicity of rural life. Some persons urge it, mistakenly, on the assumption that it is essential to the production of sufficient food to maintain the race.

The back-to-the-land sentiment is world-wide. It will maintain headway for a few years. It is possibly a complement to the cityward movement through which we have been passing. Civilization does not develop in a straight line. We progress first in one direction and then in another. In this process, we are likely to over-emphasize the importance of any single movement. I am not saying that the drift to town has gone too far, but it is apparent that the development of the open country has not kept step. No doubt many persons will be influenced to go to the country who never ought to go there: their stay

will be temporary. I am not interested in any widespread movement to get persons out of the cities and on the farms: this of itself may not be a solution. A good part of the outward drift is suburban, and to those who have the means it is toward country homes; some of it is agricultural, and this part will be governed in the end by plain economic laws and not by agitation. If any permanent gain comes from the back-to-the-land movement, it will be the developing of a conviction in the mind of the people that society in the future is to be a complex of rural and urban forces rather than an expression of urban forces alone.

I like to distinguish the back-to-the-land movement and the country-life movement. The former will have its day. The latter is an effort to make rural life as full and satisfactory as any other life.

Some of the back-to-the-land talk is only that of wealthy folk who seek a new form of entertainment and of others who must imitate them. All this is merely empty and temporary and has no effect on serious affairs.

THE COLLEGE MAN

A few years ago there was much debate as to whether an agricultural college student would

want to go back to the farm. These students are now going back in sufficient numbers and they no longer need to be urged. In fact, it is probable that many students now will be going into farming occupations who both by temperament and training are unadapted to it and who will be disappointed.

The college man is now beginning to affect the sentiment and the practice in rural communities. Formerly a college man going back to the farm was likely to be the subject of distrust and even of ridicule. This attitude is passing very rapidly in the good rural regions.

The movement to the farms means a new outlook to life, quite as much as desire for a new occupation. I suppose that students come to a college of agriculture to avoid the responsibility of being "rich," and I judge that a good part of them will be successful.

NEW COUNTRY OPPORTUNITIES *

It is not only in actual farming that persons are to be needed in the open country: the practice of customary professions and occupations is to take on added importance in country districts. The

*Also in "Country-Life Movement," p. 203. The Macmillan Co.

country physician, veterinarian, librarian, pastor and teacher are to extend greatly in influence and opportunity.

But aside from all this, new occupations and professions are to arise. There will be established, out in the open country, plant doctors, plant breeders, soil experts, health experts, pruning and spraying experts, farm machinery experts, drainage and irrigation experts, recreation experts, market experts, and many others. These will all be needed for the purpose of giving special and expert advice and developing leadership in particular lines. We shall be making new applications of rural law, of engineering, of social service, of business methods for agricultural regions, and new types of organization.

THE BUSINESS OF FARMING IN NEW YORK

On the average, the opportunities for successful farming are as good in New York as elsewhere. The great numbers of prosperous farmers in the State attest this. In regions of cheap new land, one may often locate to special advantage, and with the increase in value of the property, due to the settlement of the region, he may find himself well-to-do; but this is growing up with the country rather than farming. There are special

regions in other States, particularly in the newer States, in which profits from farming are unusually great; but much of this unusual advantage is temporary. The general tendency is for economic conditions to equalize. When land becomes very high in the Central States and remains cheap in the East, the movement comes East; for the flow of farming population is toward the cheap lands. It is apparent that good farming lands in the East, on the average, cannot decrease in commercial value.

It is best to avoid narrow specialties in farming, if one does not possess a high degree of skill. Only special persons may engage in high-class specialty farming. The general farm, with two or three leading products, is the safest and most profitable for most persons. This farm ought to be a good farm and in good condition if one is to have much satisfaction with it. The "abandoned" farms are usually undesirable, unless they are combined with other and better pieces of land. There is usually a good reason why these farms are abandoned or little used.

To find a farm, visit the locality that attracts you, and personally inspect the properties, and seek the advice of disinterested residents.

VII

A SCHOOL-LOT ON THE FARM

*Noon address to the students, New York State
College of Agriculture, March, 1911*

IN continuation of my practice of dropping into your minds from time to time certain suggestions that you may carry into your future country-life experience, I desire today to call your attention to the farmer's obligation in the training of the new generation. I wish to suggest a simple line of effort that I think might exert great influence in the re-direction of rural civilization. Into the growing conception of the farmstead I would project another unit.

A FARMER'S NATURAL RESPONSIBILITY

The re-direction of any civilization must rest primarily on the people who comprise it, rather than be imposed from persons in other conditions of life. The rural public is now beginning to understand the necessity for a rather radical re-direction of the public school system. This re-direction is to express itself in three practical directions: in better pay for the teacher, in better

physical facilities in the way of grounds and buildings and apparatus, and in a course of study that has relation to the lives of the people.

It is not enough, however, that we merely have good schools. A farmer has other responsibilities to education than to provide formal school facilities. He cannot wash his hands of his obligation to society by making even an ideal school in his community.

It is the responsibility of every parent to train the children. This responsibility cannot be delegated to the school or to any other agency, unless the parent desires to give up the children wholly into the hands of an institution or to society; and this the farming people do not care to consider.

THE BACKGROUND OF THE SCHOOL

If the country child is to be educated responsively to its environment and to the better outlook for country life, the educational agencies must have such facilities and equipment as will relate them closely to the real affairs and the common thought of the community. The school must be a part of the out-of-doors; and fields and woods and crops and live-stock and factories must be utilized educationally. We now all recognize the value of a school-garden as an outdoor labora-

tory attached to a school property. The object of the garden is not primarily to teach gardening, but to afford a working-place and testing-place for many of the ideas that originate or crystallize in the school. In most rural schools, however, it is now impracticable to have a good school-garden, for the reason that there may be no available land, and because the school is not in session when the garden ought to be in best condition, and also because what is everybody's business is likely to be nobody's business.

We can never develop country life effectively until the homes and the schools are organized coordinately. We must project the school into the home, and the home into the school.

A CHILD-LOT ON EVERY FARMSTEAD

My suggestion, therefore, is that on every farm there should be a piece of land definitely set aside for the children and the young folk, to be used for the purpose of developing intellectual interest in the farm and in country life. This might be a quarter-acre or an acre near the house and the barns, permanently set aside and perhaps enclosed with rows of trees and bushes and effective planting of flowers. In this area many kinds of tests and demonstrations could be made. Here new varie-

ties of fruits and crops and flowers could be tried; fertilizers in a small way could be demonstrated; spraying could be studied; different methods of planting and of tilling and of growing could be illustrated; small breeding-plats could be established; bird-houses could be erected; a weather-vane and perhaps a rain-gauge might find place; perhaps a small fish-pond could be established, or the retreat might run down to a spring or a brook; wild plants would be gradually assembled; pet animals might be kept; and many other tests could be made and attractive features introduced. It could be made a proving-yard and collecting-yard for the various problems that arise in the course of the farm work and which the children would be interested on their own account to try out. It would also be a play-yard. It would recognize the play-house spirit of the child and make it to be of real value.

It should be as much a part of a farm establishment to provide such a side-lot as to erect a milk-house or carriage-shed, a clothes-yard, a well-house, chicken-yard, or any other accessory of the farm.

A PART OF THE SCHOOL SYSTEM

I would incorporate this yard into the school system of the district. Now that we are to have

a new method of supervision for country schools, with an agricultural qualification for the district superintendents, I should like to see the effort made by these overseers to establish such a demonstration area on every farm in the district, or, at all events, on every farm on which there are children. The teacher in every school should have a list or a map of these test-yards, and should set the children problems that are to be worked out in them; and from these yards reports would go back to the school. Exhibitions could be held at different times, and the school could be provided with flowers and with specimens for study. When the school is let out in the afternoon the children usually drop the school work as soon as possible; my purpose is to encourage them to take the school-thought with them and to plant it in the garden.

A garden-yard of this kind would become an outdoor room in which all kinds of interesting things would in time be collected. It could work out problems with the children and set many new ideas going in every country district. It would soon become the most interesting nook on the farm. The children are the most important product of the farm and they should be given encouragement, and facilities on the farm itself, to

become familiar with the simple farm problems, and to have their minds opened to many new things that would hold their sympathy and affection.

Such areas ought to have a profound social effect in emphasizing the influence of home, and in tending to centralize the interests of the child at a time when the growth of many organizations tends to take him perhaps too much away from home and to weaken the parental responsibility.

This enclosure should not entail any particular expense. The most it would require would be the utilizing of pieces of time that are now mostly wasted on the farm because there is no attractive side-work to which they can be applied.

MY PLEA

My contention is that the farmer can by no means escape his responsibility in the development of a better country life. He must express this responsibility largely in the better education and training of his children. He cannot expect to educate his children effectively unless he has an establishment for the purpose.

VIII

WHAT THE HIGH-SCHOOL IN THE LARGE CITY CAN DO FOR COUNTRY LIFE

*National Educational Society, Milwaukee, Nov. 9,
1911 (Abstract)*

IT is requested that I explain what the city high-school may be able to do for country life. I assume that I am to have in mind the school in the large city. I begin by reminding my hearers that there is the greatest necessity that all our people understand what the country-life movement is, and help to bring about a proper equilibrium of social and economic affairs.

Every agency that teaches the people, therefore, has opportunity to help in this general forward movement. Considered from this point of view, the city high-school, as well as the rural school, may have a part in country-life work. The city high-school may react to the rural situation in two ways: first, to aid in developing a general point of view on the situation; second, to aid in fitting certain persons to establish themselves in the country. I think that the first is

the more important field lying before the high-school. This is to say that the high-school should not overlook the country.

THE POINT OF VIEW ON RURAL SITUATION

So far as possible our teaching ought to express the whole truth in any subject that it handles. It is more important that the whole truth be presented than that the pupil be taken very far into particular specialties merely for the purpose of providing what we call mental drill. If we are dealing with economics or civics in the high-school, it is important that the rural phases of the subject be given their proportionate attention; and, so far as the teacher is able, these phases of the subject should be presented from the rural point of view rather than to be included merely as incidental references and illustrations here and there.

The high-school should teach the physiology and physics and mathematics of human processes. The difficulty with much of our teaching is that the pupil does not carry it with him into life; and he does not carry it with him because it is likely to be taught in an abstract way and without any particular articulation or vibration with the situations that he has to meet or with the knowledge that he is likely to gain by experi-

ence. I do not care much about the mere "practical" teaching, meaning by that the direct outcome of teaching in dollars and cents; but I care very much to have our teaching really mean something to the pupil, and to this end all teaching should be applicable.

If there is a department of domestic science or home economics in the high-school, then here is opportunity for a very close articulation with rural affairs. I think we shall some day consider it to be important that our people know the actual products of the earth, not only that they may utilize these products effectively but that they also may have the resource that comes from good nature-knowledge. Not much of our cookery preserves for us the native forms, flavors and odors of the fruits and vegetables and many other products. I looked through a cook-book and found that nearly all the recipes for cooking potatoes are designed to disguise the fact that they were potatoes. A department of home economics can bring its students into a real relation with the products of the earth quite as effectively as can a department of agriculture itself. Moreover, if domestic subjects are to be taught, the rural phase or application should not be overlooked any more than the city phase.

The high-school library should contain a proper proportion of good rural books. I do not mean so much the merely entertaining kind of superficial literature that is likely to develop within the next few years, but good books of solid information and that give real rural points of view on the situation rather than urban points of view on rural conditions. If the city high-school has a reading-room for periodicals, a proper proportion of these periodicals should represent country affairs. My point is that all city pupils should have a real understanding, so far as they are able to get it, of rural conditions, as well as that country people should have a good knowledge of city conditions. The whole fabric of society should be presented to the pupils, so far as it is presented at all, in its proper proportions.

TRAINING PUPILS FOR COUNTRY LIFE

The second line of activity for city high-schools is aiding in the preparation of young persons for country life. If the high-school teaching articulates with the pupil's life, then the most in addition that the high-school can do for the boy or girl who would be a farmer is to discover the persons who have these tastes and then to send them out to farms where they may secure the

actual experience. One cannot learn to be a farmer merely by going through a course of instruction any more than one can learn to be a lawyer, a physician, an architect, or a mechanic, by that process. In school, one arrives at a point of view and learns something of the fundamental theory, and he ought also to have acquired habits of mastery; beyond this he must learn his practice and application by reading law if he is to be a lawyer, by doing clinic and hospital work if he is to be a physician, by going into an architect's office or into a shop if he is to be an architect or mechanic, or by going on a farm if he is to be a farmer. It is not only a question of learning the manual operations of the farm but also of coming in touch with the real problems and of understanding the psychology of rural life. Perhaps it will sometimes be worth while to establish a regular course of instruction in agriculture for such pupils as have had farm experience.

It is probable that relatively few town boys can really become effective farmers, at least not until their point of view is radically re-directed. In town life there is likely to be very little real work for the boy to do and he grows up in habits of indifference or indolence, if not of laziness; the school is not likely to correct these habits.

These traits must be completely overcome if one is to be a farmer, not that farming is to be manual toil alone but that the person may be master of his farm and his problem. We have insisted so much on what we call "character" that we have tended to develop the non-active and negative sides of our youth, and the one who is merely negative has not the qualifications for grasping and managing a business on his own responsibility.

Therefore, I think it important that the high-school discover the aptitudes of the pupils and then direct them into the particular channels that they seem to be fitted to follow. Those who desire to be countrymen should be directed to farms; and by this I mean to real farms and not gardens of make-believe suburban enterprises. After the young person has determined whether he desires to be a farmer and whether he probably has the capabilities for it, he will then choose his ways of finding further information and experience; and the responsible teacher in the high-school should be sufficiently in touch with the institutions and with the ways and means to be able to guide him effectively in such choice.

IX

THE THINGS AT HOME

Tompkins County Breeders' Association, Jan. 11,
1913

YOU are a small society in numbers, and you represent a small territory. Perhaps you sometimes feel yourselves outclassed by the organizations that are large in the public eye and that attract speakers of prominence; and you may wonder whether there is a place and purpose for an organization of the breeders of a single county in a region of general or diversified farming.

It is my opinion that these small societies are more needed now than ever before. With the many organizations and movements before the rural public, it is important that we have small groups that can discuss the proposals, determine their applicability to local conditions, and through which the ideas may be dispersed by a filtering process to the people living actually and perhaps remotely on the farms. The progress in country-life reorganization must come, in the last analysis, through those who are in touch. The large organizations may be able to make public opinion,

but the small organizations carry the word to the folks.

It is always a peculiar satisfaction to attend the small meetings in the localities, for there I see the persons who are against the problem, whereas in the State and National meetings I see also those who are sent as delegates, who are habitual attenders at conventions, or who have plans. The basis of the country-life movement lies, if it lies anywhere, on the separate farms, back in the open country on the hills and in the valleys and far on the plains of a thousand thousand districts and settlements. You represent one of these districts. I want you to feel that you, as an organization, have a direct and useful piece of work to do, and one that cannot be done by any organization representing a State or a great geographical region.

THE TOMPKINS COUNTY BREEDERS' JOURNAL

I have been particularly interested in the little monthly magazine that you publish. I have been long convinced that more or less technical journals that are able to apply modern teaching in a little locality in the spirit of neighborliness and friendship, have a place of far greater importance than at the present time any one of us is able to understand. The local paper or magazine giving

the experience of this man and that man who is known of his neighbors, and bringing into the place such things as are of special application to it, will be to the field of journalism what the small group or society is to the field of large organization. And, moreover, herein is an opportunity to say something direct and simple, and that is not colored by advertising nor controlled by over-much ambition nor weakened by fine writing. I am afraid that we have almost forgotten in these days of great circulations that journalism is as much an enterprise of small things as of big things. If journalism cannot apply itself to particular conditions in special regions, then it has small power for permanent good. I once was asked for a contribution to your journal. I found more satisfaction in permitting an article to be used there than I could have found in writing for any one of the great magazines.

I much desire that every county or small territory in New York State have a good agricultural society, and that it publish an unpretentious journal in the interest of the agriculture of its own district. Recently I have drawn a suggestion of this kind from our State history.* We need these contact-groups before we establish too

* Refer to Problem XXIV.

many farm agencies, and before we can make the best headway with a re-adaptation of rural credit, or the best application of the extension work of the institutions, or before we can have the seed-ground for the germinating of such of the new ideas as have a hopeful degree of viability. It seems very simple to me to use the State money now going to local fairs for the aid of such disseminating work as this.

A BUSINESS REASON

Your organization stands for the stock-growing interests of Tompkins county. The county is not known as a live-stock region. This is not because there is no good live-stock, but rather because the interests have not been brought together. We need very much to assemble the live-stock knowledge and experience of the county. The tabulations completed in 1910 by the New York State Department of Agriculture show 116 owners of pure-bred stock in Tompkins county, and 1,190 animals; 71 of these persons were owners of pure-bred cattle, with 712 animals. These returns are for four-footed farm live-stock only. Here is a good start, and no small investment is involved. There is a business reason for your existence.

Cannot this organization do something worth while to attract buyers to Tompkins county? Cannot any association of producers anywhere do this much for its territory? Buyers go to regions in which there is a known and dependable quantity of the product. If this association were to collect all the information about good and saleable animals in the county and put this information before the proper persons, would it not aid the business of every one of you?

I am told that your surplus calves from pure-bred bulls are mostly sold for veal. Do they not have a higher value for sale as live-stock, if you knew the persons who want them? Is it sufficient merely to produce good animals?

Is it not fairly the function of any society of a restricted area to combine business with discussion and thereby work its leadership into the affairs of its territory? Does not our rural betterment in the end express itself in better commercial results?

THE HEAD OF THE HERD

But you are a society of breeders. You like a horse because it is a horse, and a cow because it is a cow. I admire you for it.

I suspect that the better the cow, the more you care for her. Some of you have a pure-bred bull

at the head of your dairy herds, and I want you to know the results. About twenty-nine per cent of the farmers of this county have pure-bred bulls. I have asked Dr. Warren to give me the figures of his records on the relative efficiency of such herds in the counties of Tompkins and Livingston, where he has made his surveys; and here they are:

RELATION OF PURE-BRED BULL TO PROFITS

Tompkins County, Holstein Grade Herds

	Pure-bred bull	Grade bull
Number of herds	34	31
Number of cows per farm	16.7	10.3
Receipts per cow from milk and its products	\$79	\$55
Receipts per cow from cattle sold	10	8
Labor-income	1,012	396

Livingston County

	Pure-bred bull of a dairy type	Grade bull
Number of herds	33	54
Number of cows per farm	16	13
Receipts per cow from milk and its products	\$72	\$54
Receipts per cow from cattle sold	16	9
Labor-income	1,127	556

These results are most significant. We are always impressed by the selling prices of highly

bred animals, but to the man at large the production of milk (or of beef in a beef region) is the real test of the efficiency of pure-bred blood.

But these good results of the better bull are not all due to the animal himself. It is the better man who secures the better bull. He is likely to make innovations. Note that the number of animals in the herds headed by a pure-bred bull is 16.7, and only 10.3 in the other herds,— the man handles more cattle. Undoubtedly he takes more pride in his animals, feeds them better, houses them better, thinks of them more effectively. A pure-bred bull is a good teacher. I would rather have a good bull, if I were a stockman, than to have an expert to advise me, if I could not have both; and I am sure that I would not be able to derive much benefit from an adviser if I could not make it worth while to head my flocks with high-bred sires. There is no paternalism in the buying of a good bull for yourselves. You have been talking about a farm bureau: good — but get your bulls first.

X

DRY-FARMING IN RELATION TO NEW YORK CONDITIONS

*Letter to Secretary of Dry-Farming Congress,
Sept. 19, 1910*

YOUR request that I make a statement of my attitude on the dry-farming movement is deserving of some care. I am convinced that the subject of dry-farming has direct application to eastern as well as to western conditions. Of course, the movement is necessary and therefore worth while in its western applications alone, and in its bearing on the welfare of those regions it should appeal to all the people; but it also has a bearing on agriculture in the entire country, such as our people do not yet understand.

We habitually associate "dry-farming" with dry regions; but the conservation of water lies also at the foundation of agriculture in most humid regions as well as in semi-arid regions, for the crop in humid regions is very generally determined by the pinch of the "dry spell" or drought. As the strength of a wall is measured by its weakest

course, so is the crop-producing power of the year determined, under prevailing farming methods, by the poorest or least effective growing month.

Farmers in the semi-arid regions are compelled to save the rainfall, and they prepare a definite program of conservation, making this program a part of their reckoning. But the farmer in humid regions usually makes little or no allowance or reckoning for drought, and when it comes he is caught; and yet the drought and not the rainfall determines his crops. We shall never have a good agriculture until the farmer prepares for dry times and drought just as consciously as he prepares for winter. The "dry spell" of summer is usually considered to be a calamity: it is probable that a properly regulated system of husbandry would make such spells to be advantageous; or, at all events, it should greatly reduce the dangers.

The annual precipitation at Ithaca, in Central New York, is approximately 33 inches; yet there is record of a year with a rainfall of only 21.20 inches. The average recorded yearly rainfall for the State of New York ranges from 51 inches down to $28\frac{1}{3}$ inches, and if we exclude Long Island with its more uniform precipitation, the minimum becomes about $26\frac{1}{2}$ inches, or approaching closely to dry-farming conditions. There are

parts of the State in which the mean precipitation over a series of years is under 23 inches. I have before me the records for 48 years of one station in western New York, with an annual average of 27.52 inches, in which there are four years with a total precipitation of less than 20 inches (one year only 16.44 inches), and two years with a total of 20.02 and 20.61. Were it not for other aids than rainfall of the particular year (there is probably a low evaporation due to proximity of large bodies of water, and water is held in the soil from other years), this would be a semi-arid place; for a region is usually held to be semi-arid if its precipitation is less than 20 inches.

It is the precipitation of the "growing months," however, that largely determines the crop. In the dry section just mentioned there are 26 years of the 48 in which the monthly rainfall was less than $1\frac{1}{2}$ inches (which is very dry) in one or more of the months of May, June, July, August; and there are 10 other years in which the rainfall in one or more of these months was between 2 inches and $1\frac{1}{2}$ inches (which usually indicates droughty conditions). Even at Ithaca, with its mean precipitation of about 33 inches (and a maximum of about $46\frac{1}{2}$), there are 17 years out of 53 in which the rainfall was less

than $1\frac{1}{2}$ inches in one or more of these four growing months, and 14 other years in which it was less than 2 inches, making 31 years in the 53 (or about three-fifths of the years) in which droughty conditions prevailed. Even in a section in western New York with a mean annual precipitation of $44\frac{1}{2}$ inches and a maximum of $59\frac{1}{2}$, there were 5 years out of 20 in which the rainfall was less than 2 inches in one or more of the four growing months. If to these four main growing months were added April and September, all the foregoing figures of droughty conditions would be more marked.

Of course, the figures of rainfall cannot of themselves establish the presence of droughty conditions, for several other factors are involved; but they are the best measures that we have on record. It is certainly not too much to say that in most parts of the humid regions the farmer may expect conditions of dryness about every other year sufficiently marked greatly to reduce his yields. We are accustomed to hear estimates of the loss occasioned by injurious insects and by diseases of animals and plants; but it is probable that the loss from "dry spells" is a comparable damage. Humid regions are likely to suffer severely from dry weather.

Nor is it merely a question of carrying the crop over the recognized dry spells. A sufficient supply of soil moisture continuously throughout the year is a fundamental necessity of the most successful crop-growing. The acre-production must be made to increase, which means that we must be increasingly careful of our water-waste.

In the hard-land hilly regions of the East it is not only a question of the actual quantity of water falling on the earth, but quite as much the loss of the water by rapid run-off. Within a few minutes after a heavy rain the streams are choked and the lowlands fill up and perhaps overflow. The water is lost to one place and is accumulated in too great quantities in another place. The violent run-off is like water running from a roof. It tears the land, moves stones and other heavy objects, and carries away immense store of fertility. Within two days after a heavy rain the sides and tops of the hills may be suffering from dry soil. Many of the hills of the humid eastern States are unproductive, or even sterile, because they are dry.

The discussions of the Dry-Farming Congress, therefore, should have significance to the entire country. We shall find the principles of dry-farming to be increasingly applicable to the east.

In fact, these principles have been worked out in humid countries. But the present recognized methods of dry-farming are not sufficient for hill regions, and something further must be developed. The accepted practices of dry-farming are associated with two main ideas: such preparation and tillage of the land as will catch and hold the rainfall; the perfecting of such a cropping-scheme as will make the most of the situation. These are fundamental to all water-saving practices. To these methods may be added the supplying of water, other than that of rainfall, by means of irrigation. But beyond all this, we must in time devise some mode of storing the water of rainfall on the hills of individual farms.

Many of the hills cannot be tilled with profit, certainly not by dry-farming methods; nor is it advisable to cover all of them with forest or even with other cover, and even a crop cover could not hold the water. A method or "system" of storing water on steep hillsides was perfected and even patented by Asahel N. Cole, of southwestern New York, in 1884, and it was made the basis of his book called "The New Agriculture." It consisted of a series of ditch-reservoirs running along the face of the hill, connecting with each other, and filled with stones and covered with brush and

earth. These trenches were to catch the run-off and to hold it against the time of drought. Whether such a system is practicable, I do not know; but it is suggestive of a solution, perhaps in simpler and less expensive form, of a very real problem in hilly regions. It is a problem of farm engineering. We must make the most of our hills, in time.

Irrigation and dry-farming are complementary processes in the problem of saving and utilizing water. Dry-farming practices are essential to the best results after irrigation water is secured. Irrigation will certainly come in the east; but it is first necessary that we save and utilize the water that falls on the farm.

XI

HOUSING CONDITIONS ON FARMS IN NEW YORK STATE

In answer to enquiry from a group studying housing conditions in cities and desiring a rural comparison. 1910.

IT is not easy to make statements in regard to housing conditions on farms that shall be applicable to all parts of the State and to all farming conditions. It must be remembered that agriculture is not a single occupation, but a series of occupations. Many persons reside on farms from force of habit and because they cannot get away. The real farmer is the one who develops a constructive and active business on the land, as another man would develop a business in a town or city.

Housing conditions in the country run all the way from very cheap and poor tenant houses to well-appointed large farm residences. Between these two extremes there is every range of condition. The better class of farm residences is all that can be desired. The poorer class is, of

course, quite the opposite. Even the better class of farm residences does not represent money value as measured by city and town values. This is largely due to the fact that most of them were built many years ago, when materials were cheap, and also before the addition of water-works and other modern improvements. A residence in the farming region that is valued at one thousand dollars may be actually more roomy and comfortable than one in the town that is valued at more than twice that sum. In this letter I am, of course, omitting all reference to the country seats of non-residents or absentees.

I have asked Professor Warren to give me his comment on housing conditions as found in his surveys; and most of the following statements of fact are his.

FARMHOUSES

Practically all of the farmhouses in New York State, as in the northern states in general, are made of wood. In the northeastern states nearly all of these houses were built at least fifty years ago. Only a small percentage have been constructed along the newer lines. In Livingston county, which is one of the richest agricultural regions in the country, Warren found that the average value of these houses in 1909 was not

quite \$1,600. Of course, it would cost much more than an average of \$1,600 to build these houses, but this is the estimated average value of the house as it stands. Perhaps \$1,000 would be nearer correct for the average value of the farm residence in the State, but it would take over twice this much to build these houses at the present time. The new houses would probably also be worth twice as much, because new and better adapted to the needs.

The average number in the family in Livingston county is 4.2 persons, and the average of boarders or hired men .8, making a total of 5 persons as the size of the average farm family. Of course, this gives no suggestion as to the number of children away from home. In Tompkins county the average farm family, exclusive of hired help, was found to be 3.55.

The size of the farmhouse is, of course, exceedingly variable, but the average would probably be about six or seven rooms.

The farm water-supply is practically always situated at some distance from the house. On some farms running water is piped to the house, but these are exceptions.

Bathrooms are yet rare in general farming regions. In western New York, along the lake

shore, a considerable number of farmers are installing water-supply and bathroom, but outside of this section probably not more than one in several hundred of the farms has a bathroom. In one county less than one in 500 was found to be thus supplied.

The heat is nearly always provided by a kitchen stove, and in colder weather often one additional stove is used. The chief fuel is wood, but a considerable amount of coal is used in winter, particularly for the second stove.

The almost universal system of lighting is with kerosene lamps, although acetylene is used by a small number of farmers. Perhaps more persons have acetylene for lighting than have bathrooms.

The privy is located largely by chance, so that it is often near the wells, but in the great majority of cases it is not close enough to be a serious menace to the water-supply. The fact that it is often left open so as to provide a feeding-place and gathering-place for flies is perhaps the greatest source of danger.

TENANT HOUSES

All of the above discussion refers to the main house on the farm. The houses occupied by hired help are usually smaller and not in so good repair as are the farmhouses discussed above.

Probably tenant houses do not average more than five or six rooms. The difference between them and the other house is likely to be more striking in questions of repair than in actual size. The usual system of hiring men in New York State is to give the man his house and garden, some wood and a little milk. One quart of milk a day is a very common allowance. Of course all these things vary decidedly, according to the particular bargain. In addition to these, the laborer has more or less use of horses for pleasure, and his groceries and coal are hauled free.

Probably the average wage at the present time is about \$30 a month, together with the above privileges. Very rarely is a man hired for less than \$28, and in the better sections of the State as high as \$40 is occasionally paid to a little better than average men. Seldom does a married man pay cash rent for a house. Occasionally such a man lives in a village and rents or owns a house and goes out to a nearby farm to work, but the farmer very rarely rents a house to his hired man. He furnishes it, as stated. Men as discussed above are employed by the year. These statements do not refer to managers.

The remaining part of the hired help is made up of miscellaneous day and month hands. The

unmarried man who lives with the farmer's family commonly receives about \$25 a month and board. These men are more movable and are likely to be employed for only a part of the year. If they are employed for the summer months only, they are likely to receive \$30 and board, or even \$35 in the better parts of the State. A considerable number of the intermittent help is made up of men who own a little land and receive a little income from it, and who hire out by the day when wages are highest. There are also a good many men in villages who go on the farms when wages are high.

TELEPHONES AND RURAL FREE DELIVERY

Of 983 farms in four townships in Tompkins county, partly in the hill country, 884 receive their mail by rural free delivery. Probably the majority of the remaining families live so close to villages as to make it more desirable to get their mail from the postoffice. Of 698 farms, 460 had telephones. The extension of telephone service is now widespread and rapid.

THE PROBLEM

The change from old housing conditions to new is very gradual. Perhaps it ought to be acceler-

ated by having more attention given to the subject in public lecture and teaching work. It is customary not to discuss personal questions so much as crops and live-stock and commercial situations.

If the farmer lacks in some of the mechanical conveniences of city dwellers, he gains in space to each person, light, outlook, storage place, room to move, and ability to control his premises. If he were to add more freely of mechanical conveniences and contrivances, his conditions of housing would be enviable. We need now to have as much ingenuity applied to housing conditions as has been applied to farming practices.

XII

WOMAN'S PLACE IN A SCHEME OF AGRICULTURAL EDUCATION.

*Summary of remarks before Girls' Club of the
New York State College of Agriculture, November 11, 1910.*

YOU may ask me why I need to raise the question of woman's place in any scheme of education. The reason is purely historical: woman has not had her recognized place in schemes of education.

We know that education has come up out of class and of privilege. Not all men, let alone women, have had equal opportunities in the plans of education. In the evolution of educational institutions, all persons are now finding their places and are contributing their several parts to the various schemes.

The ultimate object of education by means of agriculture is to re-direct country life. The re-direction of country life rests on two corner-stones, which are, improved farming and improved home-making. If it is essential that the man be

trained in better farming methods, it is equally essential that the woman be trained in better householding methods.

The farm and the home are the two underlying factors in the country-life development. As the strength of a chain is determined by its weakest link, so will the development of rural civilization be determined by the weakness of the farm as an economic unit, or by the weakness of the home as a human unit. It follows, therefore, that the woman has equal and co-ordinate part with the man in the re-direction of rural society. She will be able not only to create a sentiment for better farming itself, but it is to be expected that her best contribution will be to create a quickened sentiment in respect to the home-making and householding end of country life. I do not mean to restrict woman's activities, but we must recognize the law of nature that certain activities are primary and that others are secondary.

THE FARM WOMAN'S OUTLOOK

The farmer has lived on his farm; he is now acquiring a world outlook.

The woman has lived in her house; she also is acquiring a world outlook.

As the house has been smaller and more confining than the farm, it has followed that woman's outlook has been smaller than man's.

As the effectiveness of the farmer's outlook is conditioned on his ability as a farmer, so is the effectiveness of a woman's outlook conditioned on her ability as a home-maker. This is why this College of Agriculture aims first to make a man a good farmer; it is equally the reason why it aims first to make a woman a good housekeeper. To put the matter in another phrase, as it is the first necessity that the countryman be a good business man, so is it of the first importance that the country woman should be domestic. I should not restrict this remark to country men or country women. It is equally applicable to all other men and women.

Whatever a woman may gain, she must never lose her domesticity. Her effectiveness as a social agent depends directly on her retaining the natural womanly qualities.

Things and affairs that formerly have been in the foreground may now need to be relegated to the background. We are placing new values on all activities. I will mention a few of these in order that you may know exactly what I mean. I am saying them not because they may be

peculiar to women but because I am speaking to women.

1. Women must escape the customary small range of conversation. The smaller the range of conversation, the more narrow is the horizon of life. Very small conversation is gossip. The gossip is always a self-centered person. The measure of one's contact with life is necessarily reflected in the subjects of conference and conversation. You have only to take note of the conversation of groups of men and women anywhere to satisfy yourself of this fact. We ordinarily condemn gossiping as wrong from the moral point of view; I prefer at present to say that it indicates a small range of interests and does not develop such contact with life as is worth while.

2. It is bound to be necessary, if woman is to take her larger part in the world's activities, that she develop a different attitude toward personal apparel. I do not have it in mind to criticise any garment a woman wears. I do not know of any garment that is more inartistic and impersonal than a man's dress coat; but the point is not there: men's clothing is standardized. Women's clothing is to a large extent not standardized. Men's styles change from year to year, but the range is very narrow. The result of it is that a man

expends much less energy in providing apparel than a woman does. I presume that we should never standardize women's clothing as narrowly as men's clothing is standardized, but there is certainly need of much effort in that direction. I think it is the place of college women to spread the idea that first-rate artists in clothing should be employed in women's work and to overcome the notion that radical styles may be set arbitrarily. Very much human energy is wasted in trying merely to readapt oneself to changing fashions, which are largely set by commercial firms that they may secure financial advantage therefrom. This handicap is well recognized by educated women. The difficulty is that the trades in women's apparel have not yet caught up with our best judgment, and the women of the present day are living, therefore, in a trying situation.

3. I think that educated women who are to carry much responsibility of the world's work must overcome some of the common notion that they are of right to be "entertained." A person who is resourceful entertains himself or herself. Of course I do not mean by this that one is to withdraw from association with one's fellows, or in any way to isolate oneself; it is possible to be resourceful without being separate.

4. The means whereby woman is to broaden her influence is first to broaden her own and undisputed sphere and not merely to enter man's sphere. In the nature of things, there is division of labor between men and women. If there are certain duties that inhere in man's estate, there are certain other duties that inhere in woman's estate. I have no desire to say what a woman's work shall be; but it is very apparent that she must be master of her own problem before she can solve another's problem.

THE DEPARTMENT OF HOME ECONOMICS

If the customary subjects in the College of Agriculture are organized and designed to train a man for efficiency in country life and to develop his outlook, so also is the Department of Home Economics in this College to train a woman for efficiency and to develop her outlook to life. A department of home economics, therefore, is not a concession to public opinion, or even alone to the special needs of woman's education. It is a necessity as a means of developing society.

Home economics is not one "department" in the sense in which dairying or entomology or soils is a department. It is not a single specialty. It stands for the whole development of woman's

work and place. Many technical or educational departments will grow out of it as time goes on.

Of course I would not limit the entrance of women into any courses in the College of Agriculture; on the contrary, I want all courses open to them freely and on equal terms with men: but the subjects that are arranged under the general head of home economics are their special field and sphere. On the other hand, I do not want to limit the attendance of men in courses of home economics; in fact, I think it will be found that an increasing number of men desire to take these subjects as the work develops, and this will be best for the work in general.

Furthermore, I do not conceive it to be essential that all the teachers in home economics subjects shall be women; nor, on the other hand, do I think it is essential that all teachers in the other series of departments shall be men. The person who is best qualified to teach the subject should be the one who teaches it.

My attitude, therefore, is that home-making subjects are just as essential a part of a college of agriculture as any other subject whatever, and that we cannot expect to make much progress in the re-directing of country life until these subjects are as well developed as the technical agricultural

subjects. There is no longer any necessity of explaining why home-making subjects are necessary in this institution. The numbers of young women are increasing. The work in itself is recognized as of equal value and standing with other work. It will grow and will take care of itself. I hope for the time when there will be as many farm women in the College of Agriculture as there are farm men.

XIII

THE PLAYGROUND IN FARMING COMMUNITIES

*National Playground Association, Washington,
May 10, 1911*

IT is an old quotation that "variety is the spice of life." It seems to be a mental need that a person shall have change in interest and in occupation if he is to lead the most resourceful and effective life. It is an old saw that "all work and no play makes Jack a dull boy." It is just as true to put the statement the other way round and to say that all play and no work will make Jack at least an ineffective unit in the world, if it does not make him actually dull. At all events, it is true that all play and no work makes one a parasite. Therefore, we do not advise the introduction of play merely because it is play, but in large part because it is one element in the necessary diversity in life.

One's occupation and one's normal activities are really educational, whether they are consciously recognized as such or not. The nature of the

outlook on the world is determined very largely by the character of the vocation and of the normal and necessary pursuits in life. The diversity in affairs, so long as one's interests are not merely dispersed, multiplies one's points of contact with the world, opens the mind, enlarges the horizon, stimulates the imagination, and, therefore, adds to one's resources.

There are two reactions to the conditions of life. One is the reaction of the person who would escape these conditions and be "free." As a matter of fact, there can be no real freedom so long as there are two or more persons in the world. The other reaction is to utilize the conditions of life as best we may for our happiness and growth. Of course, we are not to be satisfied with the conditions of life, else we make no progress; but we are to utilize the common occupations, the common play, the common diversion, and all the rest, as parts in a scheme of personal and human evolution.

The consciousness that diversity of interest and experience is essential to best development is well expressed in the rapidly extending habit of reading, in the extension of good sport of all kinds, in vacationing, in the enlargement of the means of entertainment and enjoyment, and in

the shorter hours of labor for operatives. It is now necessary that we effectively organize these agencies of diversification.

THE FARMER'S SITUATION

The farmer is no exception to all this. He needs diversion as well as other persons, but the farmer's business comprises the round of his life. He lives on his farm. His philosophy of life grows directly out of his farm and out of his occupation. He does not need to be transported wholly away from his business, and he does not require exclusively the extraneous and the exotic. He is able largely to control his situations and he works for himself, and he ought to develop his own type of life. The farmer is a part of his background.

New prospects must be set before the farming people, as before all other people. It seems to be clear that we should provide the farmer with only such innovations as are strong, native and significant. We must not attempt to make him a city man, nor to take him out of his background. We must be careful not to impose his improvement on him, but to let such improvement grow out of the situation.

I am convinced that we need to give much thought to plans for rural re-creation. By the

word re-creation I mean what it actively and verbally signifies,—“to create again.” I do not mean merely entertainment or amusement or diversion. We need to create broadly new real interests, new enthusiasms, and new incentives. This is not a question of play or of sports alone, but rather of the refreshing of the life in general.

MEANS OF RE-CREATION IN FARMING COMMUNITIES

If we are to have better rural re-creation, we must first of all have better agriculture. Better technical farming, and a more carefully organized farm plan, will give the farmer the time that he needs for other interests. In future he will be able to command at least one day a week, aside from Sunday, for reading, study, vacation, and other forms of re-creation. He may not be able to secure this day in every week of the year, but he ought to be able to average this much. The farmer's free time is to come not so much by the actual shortening of the hours of labor each day as by the organization of his business in such a way that he will have whole days to himself. This will evolve a different philosophy of the lessening of the hours of physical labor from that which obtains in the workingmen groups; and this factor

must be clearly recognized by our social economists. The farmer will not only overcome the physical slavery of his business, but he will acquire a useful degree of real mastery over his materials and his situation.

Rural re-creation must be projected for the entire rural population. It must apply to the old as well as to the young, and to the young as well as to the old; therefore, a formal playground scheme, while exceedingly useful, is not in itself sufficient to provide all the re-creation that the open country needs.

The rural re-creation should properly be educational. It should have relation to life and not be merely a patch applied to the social fabric. It should be more than mere relief from toil. I think it is possible to develop a re-creational movement that will be educational at the same time that it will have all the needful elements of change, of reanimation, and of escape.

Rural re-creation ought not to be dominated by the towns, even though they are rural towns. Such enterprises should grow out of the finances and the consciousness of the open country. I would be glad to see the persons in the towns contribute their share to good plans of rural re-creation, but I would be sorry to see such

plans supported by the townspeople or by gifts of wealthy persons. They should not be supported by merchants, bankers, implement dealers, grain dealers, cattle buyers, or other traders. Rural re-creation should not come as a concession to farmers. The farmer has a right to such development as a part of his normal scheme of life. It is our position to aid him to work it out, even though he works it out slowly: it is not essential that progress be made with rapidity.

Plans for rural re-creation should be manifestations, as far as possible, of real rural organizations, coming out of the grange, the church, the school, and other agencies already established. Some of the re-creational agencies that are already effective are grange picnics, school picnics and field days, family reunions, harvest home festivals, old home weeks, old settlers' days, celebrations of anniversaries, and fairs (particularly the local fairs).

THE PLAYGROUND

It is as impossible to develop good re-creational features in the open farming country without an establishment for the purpose, as to develop a good school without a schoolhouse and a teacher, or a good religious movement without a church building and a pastor. Good community re-

creation cannot be secured when the best places in which persons may gather for sports and pastimes are barnyards and highways. Every community should have a permanent place set aside for re-creational enterprises. This should have the greatest connection with the out-of-doors. It should be primarily a grove, with an open field adjoining; and I suggest that if there is no grove in a community that is adaptable to such purposes, an area be planted definitely with this end in view. This grove should be provided with seats, picnic tables, and a speaking-stand. Somewhere in connection with it there should be a building, preferably one that should serve as a community hall. There should also be a regular playground, to be as consciously set aside for play and for games as a town-hall is set aside for public business or a fair-ground is set aside for fairs. Perhaps the local fair-ground could be incorporated into the re-creational scheme, and a community center be begun.

We must distinguish between games and play; and also between athletics and play. We should, of course, develop many good games; but we specially need to have kinds of play in which all the young people may engage. Games are likely to be organized for the few rather than for the

many; and athletics is the development of feats of skill on the part of a very few participants.

It is essential that we make the most of all the common, native and usual kinds of play and games. No doubt something can be done to revive old-fashioned sports. The introduction of exotic and theatrical sports is undoubtedly desirable in many cases, but they should be projected on the background of common indigenous activities.

Play is worth the while when it is merely spontaneous and undirected; but it becomes very much more useful as well as more enjoyable when it is definitely organized and supervised. The time is coming when we must have in each large rural community an expert in re-creation as we now have an expert in teaching, an expert in ministering, and as we shall soon have local experts in various problems of farming. These experts will organize what will be essentially experiment stations in social practice and social opportunity. They will introduce not only games and play, but also re-direct the music, the drama, and many other public expressions of the open country.

THE THING TO BE DESIRED

Many interesting suggestions are now being made for the more rapid evolution of country life.

Certainly not all of them can be worked out in our lifetime. Perhaps many of the suggestions will be found, on experience, to be impracticable, but I am convinced there are two objects that need always to be kept in our vision: we must aim to diversify country life; and we must likewise aim to make it active.

XIV

LITTLE FISHES IN THE BROOK

Cornell Countryman, April, 1911

THE farmer is rapidly developing new points of view on all his operations. Many of these changes have been so radical as to surprise everybody. Some persons seem to think that we have now upturned and challenged everything, and that the farmer may henceforth abide in peace. Some of us know that this is not so; and I was specially impressed that it is not so when Dr. Needham dropped into my office the other day and began to talk about fish. His conversation interested me so much that I called the stenographer and jotted some of it down; and here it is:

JAMES G. NEEDHAM ON FOOD FISH

We shall come to the time when the farmer must use his streams and ponds for the rearing of fish. The farmer ought to raise his fish just as much as he raises his pork.

We have not yet sufficient knowledge to enable us to give exact advice as to how the farmer

is to rear food fish, but we know enough to realize that we have not yet arrived at a rational conception of the subject. Our fish-hatchery system is developed on the science of the past generation, and it is now inadequate. It proceeds on the principle of breeding numberless fry and then casting them wholesale into ponds and streams that may be inhabited by all kinds of fish and that may present all kinds of conditions. The result is that a very small proportion of the implanted fish survive to maturity. Many fish are carnivorous and eat their young. It is not profitable to feed big fish on little fish, any more than it is profitable to feed big pigs on little pigs.

In the early days we allowed our pigs to roam over square miles of territory. They lived as best they could on what they could pick up. At present, we confine our pigs in small areas and grow the food for them on other areas; and we have more pigs and better pigs than we had before. Similarly, we must now begin to control and domesticate our food fish. Most farms in the east have creeks or ponds, or places where ponds could be made. These ponds and pools should be cleaned of all fish except the kinds that are to be grown; and the food for them should

be produced in other ponds alongside and which are connected with the fish-pond. In the future it will be just as necessary to raise the proper food for fish as it is to raise the proper food for pigs. We have only begun to study the question of natural fish forage. Of course, we can feed fish on purchased cereal food, but this is expensive, and the practice is as irrational as it is for a man to buy all the feed for his pigs or his cows. The vegetable matter, may-flies and other organisms that fish eat may be isolated and grown in pools and ponds particularly adapted to them, as potatoes are grown in fields that are adapted to potatoes and prepared for them.

In the old days it was sufficient merely to grow pigs. They might be razor-backs or anything else. At present, we are growing different breeds of pigs, one kind being adapted to the making of bacon, another to the production of hams, another for lard, and so on. Just as consciously must we breed varieties of fish. With the exception of some varieties of carp in the Old World, we have no domestic breeds of fish. There is every reason to expect that from our bass, our perch, our cat-fish tribes, and others, we can develop forms that will be specially adapted to different conditions and to domestication.

Having ponds regularly prepared for fish and adapted to them, and having developed varieties or breeds for particular conditions and uses, we shall plant our ponds with fish as rationally and as carefully as we plant our fields with corn. If a farmer were to scatter his seed-corn broadcast throughout the woods he would not expect much of a crop; and yet we throw our fish-fry into ponds that may be as poorly adapted to the growth of these fish as are the forests for the growth of corn. Our fish-hatching and the stocking of ponds now proceed from the sportsman's point of view. All this antiquated method must go, and we must begin to rear fish as accurately as we rear fowls.

We shall recognize that there is property right in fish, as there is property right in pigs and sheep. We shall not allow fishers to fish everywhere indiscriminately just because they happen to find a piece of water in which fish live. They will be allowed to fish only in public waters. The farmer will raise his own fish in small ponds and he will have a right to all that he raises.

It will not require a very large pond to supply a family with all the fish that it wants. It ought not to be more trouble or expense to handle a farm fish establishment than to handle a farm poultry

yard or a drove of pigs. We shall find in time that an acre of water may be more productive than an acre of land.

A FISH FARM

Since the above piece was printed in *The Cornell Countryman*, Dr. Needham has presented the subject in *Farmers' Magazine*, from which I make extracts:

“The day is coming — is already at hand — when the farmer who wants fishes fresh from the water will have to raise them. Public waters are ‘fished out;’ in spite of closed seasons and frequent plantings of hatchery-reared fry, they continue to be fished out. With the growth of our population they are going to be always fished out; and there is no hope for the future of any fishing that shall be worth while except in waters that are privately controlled.

“This does not mean that there will be no fishing in the future. It only means that fishing is going the way wild fruit-gathering has gone. Wild nature furnished our remote ancestors with their entire supply of fish, fruit, game, roots — in short, with everything they required. The supply was adequate, however, for but a scanty population. When people multiplied, the wild

berry patches and wild plum clumps were soon 'picked out.' There was not enough fruit to go around. It became easier to raise a supply in the home garden. Fruit-picking did not cease from the earth when the wild briar patch was plowed under and the wild plum grove cut down. Some of the romance of hunting up hill and down dale was lost, but a dependable supply of better fruit was gained.

"And thus it will be with fishing. We are near the end of searching for untried streams and teeming lakes. We get little and seldom from fishing in public waters near home; but the prosaic methods of the garden will yet give us more fish and finer fish than we have ever known. The pioneers, ere wild fruit failed, cleared a space and planted better varieties and fenced them in and tended them, and that is all we have to do to initiate water-gardening that will be equally successful.

* * * * *

"Suppose a man owns a farm through which flows an upland trout stream with boggy edges and swales. Let the area, say 80 acres, immediately bordering the stream be represented by fig. 1. One acre of it is occupied by the stream bed. This acre produces the trout—possibly, if

of the better sort of trout stream and if poachers do not interfere, a score of small lean fish a year. The other 79 acres produce a little forage for cattle, where it is kept in pasture, a little firewood (a timber crop may have been taken from it earlier), and quantities of worthless alders, willows, sedges and cat-tails. It is all wet and sour and neglected. Save for occasional land insects that may fall into the water, the forage organisms of the trout must grow in the stream with them. No wonder the product is low, or that the planting of more fry does little to improve it.

“Contrast with this the possibilities that are suggested by fig. 2, which illustrates the same waste trout stream transformed into a privately controlled trout garden. There are 80 acres in both, but in 1 there is one acre producing fishes under a bad system and in 2 there are 70 acres producing fish forage for the trout maintained in the bed of the original stream. And, moreover, the few acres of ‘made’ dry land surrounding the water areas is more productive of things of value than the whole 79 acres could possibly have been before. Just what the increase in trout production would be in such a case it is impossible to say, because this method has not yet been tried out on such a scale. But there is no reason to doubt that

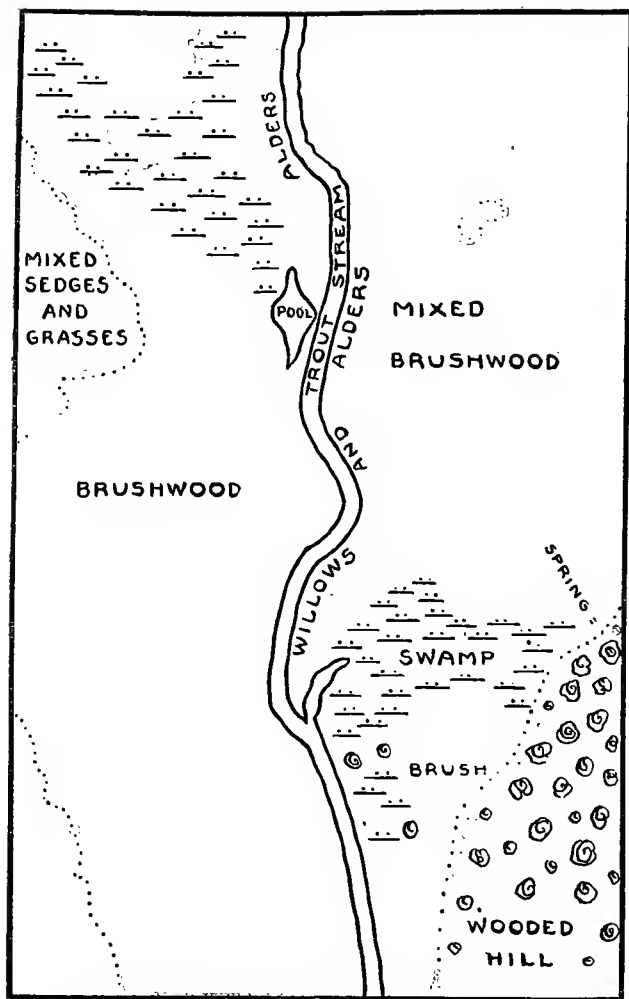


FIG. 1.—An 80-acre tract of wet land bordering a trout stream.

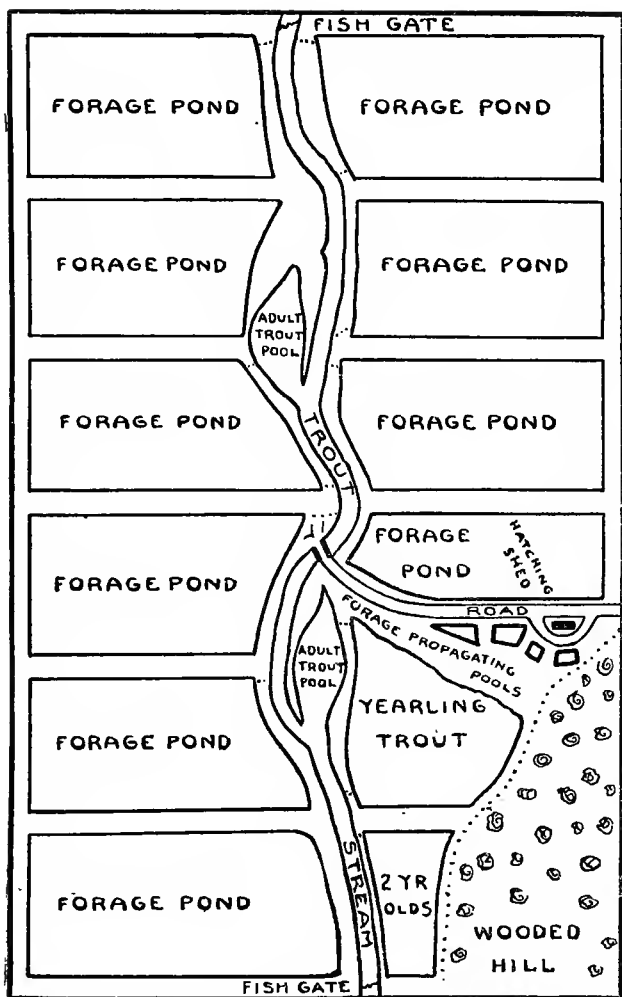


FIG. 2.—The same tract improved as a trout garden, by opening ponds and connecting them. The soil that is removed is used to make the elevated permanently dry ground between them.

the proportionate increase would be as great as in the case of hogs or cattle. And we know that the forage organisms, fresh-water shrimps, blood-worms, may-flies, and the like, can be raised in astonishing abundance. We know it, because we have been raising them in a small experimental way. Extensive production of them only awaits the application on a large scale of the proper methods of field preparation, planting and taking care of the crop.

“Here is the most neglected of our great undeveloped natural resources. The waters of the earth, which furnished to primitive man his most dependable supply of animal food, might again take their proper share in the feeding of the people if more attention were paid to water gardening. The wet waste places on millions of farms might be transformed into areas of the most productive sort. What is needed to work out the details is fish cultural experiment stations, to supplement our many hatcheries and to make them effective.”

XV

FARMERS' WEEK AND THE COUNTRY- BOND

*Brief abstract of address to the Students' Association
of the New York State College of Agriculture,
February 21, 1911*

THE Farmers' Week is the outgrowth of the Agricultural Experimenters' League of New York, an organization that was effected March 3, 1903. The object of the Experimenters' League is stated in its constitution to be "for the promotion of cooperative experiments in the various departments of farm husbandry; for the promotion of intercourse among those studying farm problems; for the advancement of agricultural education; for the collection and dissemination of data relating to country life; and for the purpose of supporting legislation favorable to the promotion of these objects."

Subsequently an organization was effected of the former and present students of the College of Agriculture and a constitution was adopted on

February 9, 1910, which stated the name of the organization to be the "Students' Association of the New York State College of Agriculture," and it stated the objects of the association to be, amongst other things: to supply a bond that shall unite all resident and former students of the New York State College of Agriculture; to promote country-life interests at large.

The Experimenters' League has practically ceased to function because the College of Agriculture has not had sufficient means to enable it to project and supervise experiments in the field in the way in which it formerly handled such work. The organization is still in existence, however. My general position is that all organizations which represent useful work would better not be discontinued even though they are temporarily inactive, but rather that they should be revived and re-animated.

The Students' Association is more actively in existence, but it is not accomplishing the work that properly belongs to an organization of this kind; and this is for the same reason, that is, because the College of Agriculture does not have means with which to hold together the work of the students and to give them definite things to accomplish.

THREE OUTSTANDING PROBLEMS

It is not enough that these two societies merely exist. They must have something definite to accomplish. Many things need to be done for country life. I wish to call your attention to the three primary recommendations of the Commission on Country Life:

1. *Taking Stock of Country Life.* There should be organized, as explained in the main report, under government leadership, a comprehensive plan for an exhaustive study or survey of all the conditions that surround the business of farming and the people who live in the country, in order to take stock of our resources and to supply the farmer with local knowledge. Federal and State governments, agricultural colleges and other educational agencies, organizations of various types, and individual students of the problem should be brought into cooperation for this great work of investigating with minute care all agricultural and country-life conditions.

2. *Nationalized Extension Work.* Each State college of agriculture should be empowered to organize as soon as practicable a complete department of college extension, so managed as to reach every person on the land in its State, with both information and inspiration. The work should

include such forms of extension teaching as lectures, bulletins, reading-courses, correspondence courses, demonstration, and other means of reaching the people at home and on their farms. It should be designed to forward not only the business of agriculture, but sanitation, education, home-making, and all interests of country life.

3. *A Campaign for Rural Progress.* We urge the holding of local, State, and even National conferences on rural progress, designed to unite the interests of education, organization, and religion into one forward movement for the rebuilding of country life. Rural teachers, librarians, clergymen, editors, physicians, and others, may well unite with farmers in studying and discussing the rural question in all its aspects. We must in some way unite all institutions, all organizations, all individuals having any interest in country life into one great campaign for rural progress.

We must make public sentiment along these three great lines of effort. I think it is particularly incumbent on the organizations associated with this Farmers' Week that these ideas be promulgated, and particularly that we undertake to develop a good campaign for rural progress. I have a special pride and desire that New York

State shall not fall behind in these great pieces of public benefit.

FARMERS' WEEK

As I have already indicated, Farmers' Week is the outgrowth of the Experimenters' League. We are now assembled in the fourth annual conclave.

The purpose of this great convention, or series of conventions, is to provide a meeting-place for all those who are interested in a better country life, a forum for the discussion of any and all the questions relating thereto, and a center from which practical and vital ideas shall radiate throughout the State. It is not enough merely that we come together and discuss. The value of the Farmers' Week lies in actually working things out.

I do not expect that we can put into operation all the suggestions that are made in a great convention like this. If we practice one-fourth as much as we preach it will be well worth our while. Our preaching must always be in advance of our practice, else our practice will be very poor. Preaching sets our ideals. We work toward them as rapidly as we can; and as we work, the ideals still stand ahead of us and lead us on. With all the progress in the extension of physical power and resources of the human race, the range of the

human mind shows still greater extension. But the ability to perform is very limited. So many are the new things to do that we feel the days to be growing shorter; but at least some of the ideas originating and crystallizing in this convention must be applied directly on the farms and in the rural neighborhoods, else the Week will be merely one of entertainment. Farmers' Week ought to function 365 days in the year.

The enterprises that converge in Farmers' Week are practically as many as the departments comprising the College of Agriculture; and in addition thereto are many social and economic movements that are not represented in the departmental organization. Farmers' Week is one of the meeting-places for the country-life development of the State.

YORK STATE COUNTRY-BOND

All these many organizations and activities ought to be consolidated, or at least federated, into one organism for country-life work. It is the first object of the Students' Association "to supply a bond." I now, therefore, suggest that we converge all the activities of Farmers' Week into a York State Country-Bond.

I do not have it in mind to organize a new society with constitution, by-laws and officers, but

only to bring together all these agencies to discuss some of the questions that are common to them all. I should like to have one hour set aside each day in Farmers' Week for a general meeting of all the organizations, for the discussion of questions that originate in the different departments and organizations. If, for example, the New York Plant-Breeders' Association were to pass a resolution in regard to the breeding of crops, its authority would be accepted by the public at once; but if it should pass a resolution in regard to agricultural education or parcels-post or other general subject, the action ought to go before a general meeting and be reinforced by the authority of all the interests that make up Farmers' Week. It would in no way be a competitor of societies that already are in existence, but rather a federation and a clearing-house for the activities that naturally center at the College of Agriculture and that find their public expression on the occasion of Farmers' Week.

The two organizations that would be most central to the York State Country-Bond are the Experimenters' League, standing for investigation, testing, demonstration, and recording of experimental results; and the Students' Association for fellowship and public work. The former would

be concerned chiefly with questions of technical agriculture; the latter would be concerned chiefly with questions of country-life welfare, such as church and school work, fairs, village improvement, rural health, rural government leagues, business cooperation, libraries, good roads publicity, and the like.

Associated with the Farmers' Week are a number of regular organizations, such as the Home-Makers' Conference, State Drainage Association, New York Plant-Breeders' Association, Poultry Institute, Rural Church Conference, Vegetable-Growers' Association, Horticultural Union. There will eventually, no doubt, be as many of these organizations as there are departments in the College of Agriculture. There is always a tendency to take these departmental subjects out of the Experimenters' League, but there will still be need of the League to take care of the general and unseparated units.

By a proper process of welding we could have a confederation or bond of as many societies or committees as there are lines of work to be done.

DEFINITE SUGGESTIONS

The gain in the federation of the Country-Bond, such as I have suggested, lies, first, in the

very fact that it is a bond, or a union of forces; second, that it will enable us to secure unity of action on public rural questions; third, that it will bring together people of many kinds and many minds, not alone students; fourth, that it will result in the holding of a number of mass meetings at each Farmers' Week, to discuss public policies that originate in the branches, groups and committees.

I am aware of the fact that I am now speaking to one of the co-ordinate branches or parts of Farmers' Week, that is, to the Students' Association. I therefore close my remarks with a suggestion of definite things for this Association to undertake this coming year, as follows:

(1) The consideration of a resolution that it is the sense of this body that we band ourselves for a campaign of rural progress within the Empire State.

(2) That the Association express itself on the nature and work of county and local fairs.

(3) That the Association consider the feasibility of endeavoring to promote the establishment of rural improvement societies, which shall have for their object the general betterment of country-life conditions in the care of roads and roadsides, of public property, river banks and lake shores,

the elimination of advertising signs, controlling the depredations of the telegraph and telephone companies, spreading information in regard to trees, lawns and flowers, and, in general, making public sentiment looking toward the increasing of the attractiveness of the open country as a place in which sensitive persons may live.

XVI

THE FARM VEGETABLE-GARDEN

Noon address to students, January, 1911

IT is not alone important that the farmer raise products that he may sell, but also that he may grow as much as possible of his food supplies. Ordinarily he figures his economic returns in the amount of saleable products, rather than by adding the quantity and value of consumed products.

One of the easiest ways whereby the farmer may secure home supplies and thereby cut down his grocery bills, at the same time that he increases the range and interest of his diet, is by the growing of a garden. It is often said that it is not profitable for the ordinary farmer to raise a garden, inasmuch as he can purchase the supplies cheaper than he can grow them; but as a matter of fact if he does not raise these additional supplies he is very likely to go without them. A good garden may be just the turning-point between a good living and a poor living; one cannot starve if he has a good garden. Many laboring men are aware of this.

Whether the farmer can afford, as a matter of practice, to raise a garden will depend very much on the general farm scheme. If the garden is a mere addition to his ordinary work, planned without reference to the organization of his business and the amount of help he will be able to secure, then the garden may be a burden and bothersome. It is not enough merely to advise that the farmer raise a good supply of vegetables and fruits: the man must so organize his farm scheme as to allow the growing of a garden to be an integral part of his plan. He should count it in with the cost of the maintenance of his business and he should consider the product of the garden to be one of his assets.

The inefficiency of many farmers is due not so much to their ignorance of farming methods, to lack of industry, or even to lack of good judgment in the actual producing of crops and the raising of live-stock: it is quite as likely to lie in the lack of any thoroughly considered plan of farm management whereby the whole year's business and the whole operation of the establishment is considered to be a single enterprise, which will have as much system as any other business enterprise. Even though the farmer may not think it possible to undertake a regular system of book-keeping with the different parts of his enterprise,

it is nevertheless possible to systematize the work so that all the efforts of the year become regular parts of a continuing business process.

The lack of a good farm garden indicates, in probably the great majority of cases, the lack of a good farm plan. What the plan of any particular farm shall be cannot be determined offhand or by persons residing at a distance and not knowing local conditions. One must know the farm itself, its situation, ability and capital of the farmer, and many other items. All I can do in a talk of this kind is merely to call attention to the need of a systematic business organization.

A somewhat similar state of affairs exists in the southern States, where persons who grow cotton may produce none of the staples on which they themselves subsist. The small farmer, making a hand-to-mouth living, may still purchase his flour and his meat from the northwest and practically all his living supplies from the store. A different plan of organization might enable him to save much of the outgo and have a better living at the same time.

WHAT FARMERS GROW IN THEIR GARDENS

In a survey of 106 good farms in Livingston county, New York, Kutschbach found that the

total value of potatoes to the farm used by the farmer himself was \$28, the value of all garden crops was \$15, and the value of all fruit so used was \$21. This shows that the potatoes constituted the chief vegetable, and that the other vegetables must have been relatively few. A good number of farmers grow cabbage and tomatoes, but the other garden produce is grown by a limited number of persons. The majority of farmers have only two or three vegetables aside from potatoes.

The farmers of Livingston county are more prosperous and are receiving more from the farms than are the farmers in many parts of the State. They also receive more from the farm because their agriculture is diversified. The size of the family is also somewhat larger than it is in many other parts of the State. The following table shows the average value of various products furnished by the farm and also the average amount in Livingston county in 1909. These figures are for families averaging five persons:

	Value per farm	Amount per farm
1. Potatoes.....	\$28.15	50.3 bu.
2. Beans.....	2.19	35.0 qts.
3. Wheat flour.....	22.14	738.0 lbs.
4. Buckwheat flour.....	.13	3.7 lbs.
5. Apples.....	11.81	23.6 bu.
8. Milk.....	29.96	730.7 qts.

	Value per farm	Amount per farm
9. Butter.....	\$38.29	133.9 lbs.
10. Eggs.....	22.72	103.3 doz.
13. Honey.....	.85	6.4 lbs.
14. Wood.....	40.99	22.8 cords (18-in. wood)
6. Other fruit.....	8.92	
7. Garden crops, etc.	14.65	
11. Poultry.....	15.26	
12. Other meat.....	54.06	

In Illinois (Bull. 105), a half-acre garden, mostly horse-cultivated, averaged \$105.23 gross value annually for five years. The average cost was \$30.78; profit, \$74.85. In the last year of test, the results were respectively \$136.81, \$27.73, and \$111.08. Labor was greatly reduced by the free use of the wheel-hoe and by seasonable working of the soil.

TESTIMONY OF SEEDSMEN

I have asked a number of the leading seedsmen whether the retail sale of vegetable-garden seeds is chiefly to farmers or to others. These seedsmen report for the most part a growing demand on the part of farmers for garden seeds, but they agree that the farm garden is not a heavy consumer of garden seeds. The comments in these replies are particularly interesting and extracts may be made from them.

One firm says that the farmers are interested in the "standbys" that they grow year after year. Most of them have saved their seed from their own crops, so that it is difficult to state what are the main characteristics of the varieties they grow. These varieties are likely to have crossed and recrossed until they become unlike any other varieties with which the experienced seedsman is acquainted. Such farmers are likely not to take pains to inquire about the new and improved varieties; and this accounts for the fact that seedsmen are still obliged to sell quantities of seeds of varieties that were well known some twenty years ago, but which are surpassed at the present time, both in quality and productiveness.

Another seedsman writes that the average farmer usually confines his vegetables to potatoes, cabbage, beets, turnips and things that will winter over. He is likely to take even his roasting ears from the field corn.

Another states that the general farmer purchases comparatively few vegetable seeds, the orders usually averaging not more than \$1.50. This, of course, is aside from those farmers who grow cabbage or onions as field crops. For the middle west he reports that the farmers grow such vegetables as radishes, onions, cabbage, beans,

cucumbers, sweet corn, and a few melons. There are a few who plant carrots for the horses, as well as for table use, and some grow more squashes than the family requires, but plant them, as a rule, along the edge of a cornfield as they would plant pumpkins among the corn. This writer says that from his experience the practice of the farmers growing their own seed is now largely done away with, as they find the quality of purchased seeds superior to those they can grow themselves.

An eastern seed-grower writes that the farmers nowadays include a good assortment of vegetable seeds in their spring orders, and also a fairly good lot of flower seeds of many varieties; and that during the past several years he has noticed a tendency on the part of farmers to increase the varieties grown in the home garden. In contradistinction to this, another eastern seedsman finds that the general farmer uses very few garden seeds, and that he depends very little upon this class of buyers. Still another firm finds that a relatively large proportion of the vegetable seeds sold in packets presumably go to family gardens in farming communities, and this trade is probably large; yet he is of the opinion that the kitchen-garden of the ordinary farmer in most

communities does not receive the attention it deserves.

WHAT IS TO BE DONE?

From the preceding statements it will be seen that we need to attack the garden problem as well as other deficiencies in country life. There needs to be a general spread of sentiment in respect to the growing of fuller and better gardens, chiefly that the family supplies may be greater in quantity and variety, but also that an additional interest may be added to the farm home. The German or French family living on the land will have a garden comprising a good variety of vegetables, together with a medley of flowers, and perhaps of small fruits, and the whole area will afford not only a source of supplies but will be a most interesting area on its own account. Perhaps we cannot yet expect this kind of a garden to develop on the average American farm, but surely something can be done to improve the condition that now exists. In the case of the foreign family, the women may do much of the garden work.

The question of help, to take care of the garden, is of course a very important item, as it is of anything that the farmer plans; and it is largely for this very reason that a small and scant garden

does not pay,—it does not produce enough to pay for any labor that is put on it. If the farmer were to set out to produce one hundred dollars' worth of produce from his garden, it would pay to put some of his hired labor on it.

Nothing can be better than a garden to teach a child the conditions and results of crop-growing, but in this case the area should be well planned, so that it will really teach something. If the school-teacher were to give instruction in home-gardening, and plan an exhibition for the school in the fall, great interest could be aroused in the subject and much good might come to the children. I wish that parents would consider this subject.

But the farmer who really wants to make a garden a part of his source of living should not depend on the children and women to make it. The probability is that most farmers have enough unutilized time to keep a garden in good condition.

The garden should be so laid out as to require the least work for a given result. Long rows, far enough apart to admit of horse tillage, provide the best layout. The place may be alongside some tilled field near the residence; or between the residence and fields, where the tillage tools may be taken through it as they come and go. It is

well to change the area from place to place every two or three years, in order to provide a rotation of land and to escape soil-diseases; or, if this cannot be done, the crops may be alternated to the different sides or ends of the same area.

It should be the aim in any farm family, on a good farm, to have a fresh vegetable every day in the year,—from the time radishes and lettuce come in the spring till the last potatoes, beets, cabbages and parsnips are used from the cellar. It is odd that the city family is likely to have a better range of vegetables than the farm family; and it is curious to see farmers buying the common vegetables when they come to town and carrying them out into the open country. I think that every farm family this year should have not less than ten kinds of vegetables growing in its garden, aside from potatoes.

It is apparent that the garden has been disregarded in the farm scheme.

XVII

THE PLACE OF AGRICULTURE IN HIGHER EDUCATION

University Convocation, Albany, Oct. 28, 1910

THE subject that has been assigned to me for the morning's discussion may be approached from one or both of two unlike points of view, —from the side of the general social welfare, and from the side of the technical content of a course for the higher education in agriculture. I am most interested at present in the former, although the effectiveness of any education by means of agriculture must depend on the soundness of its organization in any institution, the carefulness of its processes, and the enthusiasm of its execution.

In this paper I am asked to speak of the place of agriculture in the higher education, and I take this to mean in regular college and post-graduate courses. Therefore I am not now considering short-courses, propaganda, and other useful extension means by which institutions may reach and help the persons on the land.

THE SOCIAL SIGNIFICANCE

We are gradually passing to higher levels and to broader views of life. Educational procedure is keeping step with this onward movement and is constantly readjusting itself to conditions. That is to say, education is becoming a real part of life.

Education has not always been a real part of life. It has not related itself to the work-a-day affairs of men and women. It has not been a real vestibule to the activity and accomplishment of adulthood. In making these statements I intend no disparagement of the educational policy and procedure of our former days. I am speaking from the point of view of the evolution of human institutions. Our older educational method made strong and staunch men, but it did not give us the technical knowledge that we needed to conquer a continent or a world and to make the best use of it. School and life have been at variance.

Whatever may have been the theory, it has been the practice that education is the privilege of the special and advantaged classes, of those who have risen out of the general human mass, and who all too often have stood stolidly on the backs of the subject peoples. This has necessarily been so; and yet, during all these many

centuries, the common people in their own places in all the ways and byways of the world have been calling bitterly for help.

It seems to be a temper of the human mind to desire those things and to endeavor to reach those states that lie far beyond the common life of the common day. We set our affections on things remote. We have desired to be translated, even from the days when the followers of Dionysus projected themselves into other states until the present time; and yet we live in a real world of actualities and of common things. If we are to make this real world mean very much to us we must put ourselves in vibration with it and be prepared to receive the most from it; and if we are to effectualize the lives of others, we must open their minds to the meaning of the common world in which they live. Even if we are thinking chiefly of the world to come, we really cannot prepare ourselves effectively for it without becoming a real and willing part of the world in which we live.

The world is gradually coming to this point of view. We have practically left the old definition of "culture" as the end-all and be-all. We are now educating our people broadly for efficiency and capability. We are escaping our bonds. We

are rising beyond the narrowness and poverty of old educational systems.

We shall not lose the old. If the old will no longer constitute the whole, it will still contribute its part in the development of the race, and I think, in its re-directed forms, will be absolutely more important than it has ever been in the past. We are escaping educational manners and attitudes, and, however we define it, we really believe that an educated man is not determined by the particular route through which he has come, but by the perfectness to which he has developed in breadth of view, clear reasoning, good judgment, tolerance, high ideals, sensitiveness to art and nature, and devotion to service.

In the past fifty years or more we have been adding to college courses one subject after another. Our educational structure has been growing by the process of accretion. We have added medicine, engineering, mechanics, and other professions, but at last we have introduced a leaven into the very center of the lump. This ferment is education by means of agriculture.

Most of our special and technical college education aims to develop the professional and occupational side of the man in order that he himself may receive more reward for his effort and reach

a higher place amongst his fellows. It is concerned only secondarily and often remotely with the man or woman who actually performs the ultimate labor. In agriculture, however, the case is quite different, because the man on the farm is the one who himself performs the labor or is immediately responsible for it. The whole purpose of agriculture-education, if it is true to its opportunity, is to reach the last man in the terms of his daily life. This is why our leading colleges of agriculture are so vitalized with the social spirit. Here is an educational process that attempts to reach the real fundamental strata and the broad human levels. It cares less about professionalism and occupationalism than it does about the development of all the folk who live on the land, to the end that a new rural civilization may be produced. Education by means of agriculture, therefore, is not merely to add one more thing to our educational institutions: it is to re-make much of our education in a spirit of real democracy. In this great result it will be seconded in a very effective way by the complementary movement to educate workers in all other industrial fields.

All this may sound like the vagary of a specialist, but I am willing to wait the issue. The move-

ment will develop not only the individual but will relate him to his responsibility to the welfare of the outermost man and woman. It is dominated and directed by the idea of rendering service. It takes hold of the real problems of the people in the places where the people live.

This education by means of agriculture, which has been slowly formulating and finding itself for a century, has now become visible, and in my opinion it is the most important single contemporaneous contribution to the method and outlook of education in general. You will find it re-directing our educational thought in the time just ahead of us.

THE COURSE IN AGRICULTURE

In respect to its technical method, education by means of agriculture introduces observation and discussion of objects, phenomena, and affairs, as they actually exist in their own places. It takes the student to the field, the farm, the forest, the stable, the dairy, the harvest, the market. It is simple, direct, and devoid of too much pedagogical theory and indecision. It endeavors to make the common things of life worth while; and we know that as soon as these things are worth while the most important step in their improve-

ment has already begun; and when the things at hand are really worth while, all other things are worth while.

Of course, it goes without saying that the effectiveness of agriculture as a means of training depends on the way in which it is conducted in any particular case. We may expect to find loose, inadequate, and ineffective teaching of agriculture as of other subjects, and even more so, because the subject is new and the educational methods are not yet well worked out. It is possible to make a course in agriculture in the high-school and the college just as definite, organic and sound as a course in chemistry, physics, Latin, calculus or civics. Until this is accomplished we cannot expect the best results from the work, but this realization is coming more rapidly than many of us are aware.

The experiences of the leading colleges of agriculture illustrate distinctly what may be accomplished with these subjects. The old department of "agriculture" in the institutions is now broken into definite lines or subjects that demand the most direct and painstaking work and that call for the exercise of great diversity of powers on the part of the student. I may mention, for example, such subjects as chemistry in its many relations

with agriculture; animal husbandry, meat and milk production, stock-judging, nutrition and principles of feeding; entomology and other phases of biology; dairy industry, with milk tests, butter-making, cheese-making, bacteriology, and the like; pomology, floriculture, greenhouse construction, market-gardening, and so on; the breeding of plants and animals; rural mechanics; meteorology; studies of soils in their physical, chemical, and biological relations, soil surveys, and charting; plant physiology in its relation to the growing of crops; plant and animal diseases; poultry husbandry in many phases; bee-keeping; home economics in its rural relation, including food, sanitation, nutrition, house-planning, household art and management, and the like; rural economy with historical, social and economic relations; rural architecture; rural art and landscape gardening; forestry; rural normal work of many kinds; and other subjects. From this great body of subjects and problems it is possible to develop college and post-graduate courses of instruction that are as concrete, thorough, and scientific as those in other departments of human knowledge. From this field, also, general colleges and universities will be able to choose excellent subjects for the curriculum. Of course all such instruction,

if it leads to regular college honors, must rest on fundamental work in English, physics, chemistry, geology, biology, drawing, and the like.

It is not contended by anybody that we have yet attained to perfection in the organization and study of any of these subjects, but progress is making rapidly, and we have now reached the point at which we are certain that this group of subjects may be made effective means of training men and women for the work of life, whether they are to be actual farmers or not.

The effectiveness of any study depends more on the way in which it is organized and taught than on the particular subject-matter itself. That is to say, if one person were to teach both Greek and farm-crops and were equally prepared and interested in the subject-matter of both, he probably would give as sound an educational course in one as in the other.

I hope that we are now fairly away from the idea that the value of a subject as training, or as a worthy object of pursuit, is in proportion to its remoteness from the affairs of life. All science is science, and all intellectual effort is intellectual effort, whether it has immediate application or whether it has not. Its effectiveness as a means of mental training does not depend on its utility

or non-utility, although great difference may result in the outlook of the student and in his usefulness to the world from the pursuit of one phase or the other. We should have equal recognition for all thorough and conscientious study, whether by teachers or students, in whatever field of knowledge or endeavor they may be expending themselves. We need carefully to guard the method of our instruction to the end that nothing may be thrown together or be sensational or superficial or exploitational. I want particularly, in the agricultural work, to be sure that those who are fitted in the colleges to teach agriculture in the schools and other institutions shall be thoroughly well grounded in their science and in their philosophy, so that the work for which they may be responsible shall be of equal grade and intensity with any other work. The reputation (and the value) of education by means of agriculture must rest in the end with the forward school men.

These are some of the aims of the college of agriculture in this State; and I think it is due you that I explain them.

OUTLOOK

The movement for agriculture-education is well under way. It will grow greatly. It will take its

place with other phases of the higher education, as rapidly as it proves itself. It is not to take the place of other means, but it is to contribute something to the broadening of our conception of education. Its effectiveness at any place or time will be determined not by the kinds of subjects that it handles, but by the integrity of the work.

XVIII

NEEDFUL RECONSTRUCTIVE SENTI- MENTS IN PARTS OF THE OLD EAST

Grange Hall, State Fair, Syracuse, Sept. 17, 1909
(now much modified)

MUCH has been said of late as to the stationary condition of agriculture in the old eastern States. I think that much of this discussion is mistaken, and that it often proceeds in ignorance of the very deep and real, even if undemonstrative, agricultural sentiment of the people. So far as the leaders are concerned, there is probably not great difference in outlook between any parts of the country.

It is natural that old regions should be conservative: they have passed their days of exploitation. Yet, the old East has much to learn from the generous spirit of the young West, and I here make some contrasts by way of suggestion. I hope it is needless to say that I am interested in the rural development of all parts of the country; and I make these comparisons only that I may stimulate reconstructive forces.

What the agricultural condition of the old eastern States, as of other States, is to be is a question of far greater importance than the mere raising of produce. It is as important to develop the internal resources of a State as the external trade relations and the politics. Therefore, the appeal should be made to all the people who are interested in public affairs.

THE ATTITUDE OF DEPRECIATION

A common attitude toward agriculture and country life in the old eastern and southern States is likely to be one of criticism. The people dwell on the loss of rural population, on abandoned farms, on decadence of the country town, on the lessened valuation of farm property, and on the emptiness and barrenness of country life. I find the statements of eastern men quoted all over the West in derogation of eastern agriculture.

In the long run and broadly speaking, the condition of country life in any region is about what the people make it; and the people do not make more out of it than they expect to make. Whenever there is a general attitude in any community of derogation of any industry or condition, without being coupled with a constructive movement, there is, of course, likely to be an actual and

continuing decadence. The newspaper press in any State can do much to correct the condition.

I am constantly impressed with the surprise that persons in other regions express when they find very profitable farms and orchards in New York State, as if they had expected to find only the contrary.

THE CONTRASTING ATTITUDE OF THE WEST

In contrast to all this is the method of the West, particularly of those parts that we loosely assemble as the "new West," meaning by that the new irrigated regions and the newly-settled communities and those that are now much in the public mind as new "projects." As compared with the East, the West has no past and no traditions. Its attitude, therefore, is one of prospect rather than of retrospect. It is natural that the people should enlarge upon the hopeful side and overlook or minimize the hopeless side.

All successes are noted and heralded in the West. The result is that it has come to be the prevailing opinion that agricultural opportunities now lie only in the West, particularly in the Far West. This, however, is a wholly mistaken notion. I have seen much of the agriculture in all parts of the United States; I know that there

are good opportunities wherever there are good men: there are probably as great opportunities in the East as in the West. I recognize that there are special regions in the West, particularly in some of the small irrigated communities, where conditions are abnormally good; but so are there conditions that are unusually good in many parts of the East. I think it would not be difficult to match most of the accounts of great farm successes in the West by comparable successes in the East.

The new West is dominated by the spirit of the advertiser. The East has become more or less self-satisfied or indifferent. The agricultural possibilities of the West are much better known in the East than the possibilities of the East are known in the West. In this regard the West, speaking broadly, is provincial. This condition is now beginning to change, and we foresee a gradual but important movement of land-buyers to the East.

It is not strange that persons have left the old East for the new and boundless West. Most strong men are individualists by nature and they long to be free and to live their own lives. As soon as the lines of civilization become hard and set, persons begin to desire the unrestraint of regions where there are no signs forbidding trespassing or walking on the grass and where every

man is free to meet his neighbor on common ground. This is the spirit that has impelled the settlement of the new places on the earth and that has taken men beyond. Those who conquer are the ones who have left the roof-tree or who have developed strong lines of thought and action of their own. A new region is always a land of opportunity. It typifies expansion and unrestraint, and stands for the hope that springs eternal in the human breast.

Against this compelling force of the West, the East must set forth its superior advantages in other ways, and the eastern farmer must develop his feeling of conquest over nature. The eastern man may secure much of the freedom that all men crave by developing a better and more resourceful contact with the earth and by a fuller understanding of all the forces with which he works. He must have in him much of the naturalist, that takes him into the woods and fields with the spirit of the nature-lover as well as with the spirit of the farmer; in fact, the spirit of the nature-lover and of the farmer should be one. And he should also feel the appeal of ancestry and of the things that have transpired in his community.

Courageous men have gone into the West. They have been largely those who have been

willing to make sacrifice and to put forth great effort and to risk. Many of those who have gone have been the ne'er-do-wells, and they have drifted on from place to place and have made little impression on the country; but those who have built the West have been men of conviction and of courage. There are parts of the irrigated West in which persons pay more than one thousand dollars an acre for land for agricultural purposes. One reason for the good results is the fact that these are the thousand-dollar kind of men.

NEED OF A NEW ATTITUDE IN THE EAST

The people must begin to convince themselves of the truth of the opportunities that lie in the East as well as in the West. If I were speaking to farmers in the West or the far West, I should urge them in much the same terms, although they might need it less.

We need everywhere to organize country-life interests and to learn to work together; and we need most of all to learn to appreciate what we have and to make the most of it. If the East had the same careful methods of handling and packing fruit that are employed in some of the smaller irrigated regions of the far West, it would put before the world as commanding a product.

It is proper and right to talk about decadent conditions, and to describe abandoned farms, and all that, provided it is done for the purpose of arriving at a true measure of conditions in order that a constructive program may be proposed. It is not worth while to do so if it leaves only a feeling of hopelessness and arouses no plan of betterment. Every time that we describe one abandoned farm we ought to describe three well-occupied farms; and we ought to understand the reason for the abandonment.

There are great reserves of land and natural resources in the East. These will be of use in their due time and season. It is really a sorry thing, in the present state of society, for any State or Territory when all its land is taken up or completely used, for then there is no chance for expansion; and local growth develops the latent powers of the people. One reason why irrigated farming in the West has made such marked headway is because it stimulates all men into action by its conquest over the forces and the conditions of nature.

Now that the opportunities for expansion in the West in the way of virgin areas is relatively less than formerly, there will be a return to the South and East, which is again the land of opportunity.

Land is relatively cheaper in the East than in the agricultural West. This return movement will undoubtedly be a good thing, for there are excellent opportunities in the older regions, and these regions should profit by the men of the newer regions. Railroads will bring about much of this equalization, by their interest in placing western people on eastern and southern lands.

WHAT'S TO BE DONE

I now come to a consideration of things to be done by the people of New York State, to whom I am speaking, as a beginning in the further upbuilding of the country. The people must put the best foot rather than the worst foot forward. They must let it be known on all proper occasions that there are good farms and good rural conditions in the East. They must rouse themselves to keep good movements going, and to be chagrined when any other region gets the start. If some of the spirit that marks the irrigated and other regions of the new West were to pervade the rural sections of New York and New England, it would be possible in five years to change the whole course of public thought in regard to the agricultural and country life and to set many things in motion.

Three matters are of immediate and fundamental importance:

(1) The East needs to have *more faith in land*. There may be more acres of land in some of the western States than in the old eastern States, but the size of the acre is to be considered; and an acre of land is as large in Rhode Island as in Texas. As a matter of fact, the value of produce per acre is greater in the eastern States than in the western States, even with all their new fertility. In New York, people have been so accustomed to thinking of public affairs in terms of commerce, transportation, merchandizing, stocks and bonds, that they overlooked the value of land, and ceased to have confidence in it. Wherever there is a thrifty agricultural population there is also faith in the significance of land, not only on the part of farmers but on the part of bankers, storekeepers, and all other classes of the population.

(2) At the same time, the East needs to *develop pride in its opportunities, its heritage, and its resources*. The natural resources of the East, in an agricultural way, are as great as those of other similar areas. One difficulty is that we have not been developing them nor even utilizing them properly. We have been trying to cultivate remote and infertile hills, when these hills ought

to be in productive forests. A movement should immediately be set on foot to enable counties, and perhaps townships, to secure the remote hill lands and to put them into forests, not only as a means of developing the country in general, but of providing revenue for the counties in years to come.

(3) The East should have *a regular campaign of conservative publicity* in respect to the agricultural possibilities. I suggest that every agricultural society in New York State for the next twelve months discuss at every meeting the agricultural successes in the State. If the attention of all the people were focused for one year on the agricultural possibilities, on the discussion of successful farms and good practices, it would result in such an encouragement to the situation as would revolutionize the popular outlook. I suggest that every grange in the State, every farmers' club, every horticultural society, every poultry association, every live-stock organization, every florist club, and every other kind of organization that deals directly with country life, devote every meeting for a protracted period to some phase of this great question. There is no occasion for discouragement. Understanding the situation, it should be easy to take means to remedy

the deficiencies, and then start on foot an active, progressive, reconstructive movement.

It is time that all States, East or West, arouse themselves to the fundamental importance of their great agricultural interests, not in an advertising or noisy way, but in a constructive way. These interests must be dealt with in a large and liberal spirit, and the people must accept the advice of persons who see these questions broadly rather than of those whose horizon is bounded by one farm or one township. No great business can be developed without putting money into it; and a State must put money into its agriculture if it is to maintain its agricultural position. It is simply a question of good business investment. We get out of any enterprise, in these days, in proportion as we put into it.

The whole question of the utilization of waste and unproductive lands and forests in New York ought to be taken hold of immediately with vigor, not in any temporizing and half-hearted or apologetic way. All water supplies of the State should be studied with reference not only to the developing of large power and the support of cities, but the utilization of them in small power and water facilities for farms, and also for providing water for irrigation. A State should undertake

large experiments in these directions as well as in the developing of its forests, and in other ways.

The State should also make a thorough-going survey in detail of the agricultural possibilities in every township, to secure the local facts on which to construct a modern country life. No one now knows what are the real agricultural possibilities of any State, except in a few localities and for particular crops. These are underlying factors and are more important than placing agents in localities or organizing societies, however good and useful these may be in themselves.

Money and energy and intelligence must be put into the New York farms, as they would be put into a good business undertaking; and the situation can never be retrieved or the State hold the place that it deserves until this is done. It is time that all the people recognize these facts, and that the State be roused to the necessity of a thorough-going and forward movement in the interests of an orderly and substantial evolution of our country life. With an aroused public sentiment in any region, a stimulated imagination, and a proper pride in locality, all permanent reconstructive measures will come substantially.

XIX

THE FARM-BUREAU IDEA

Forest City Grange, Ithaca, Jan. 4, 1913

EVERY one seems now to be interested in country life and the new applications of agriculture. Naturally this interest is most violent in cities and towns and amongst those who have little personal contact with the land. A perplexing variety of plans and schemes is now before the people. We sometimes wonder whether they will work at cross purposes. Nobody knows. Probably they are all good in their way. At the moment there is widespread agitation for the establishing of farm bureaus. Many of the movements will resolve themselves and come to their own conclusion. However, it is well for us to bear certain principles in mind; and I want now to call your attention to some points of view that seem to me to be underlying and, therefore, essential.

I am committed to the idea that there should be experts or counselors in the localities. I expect

to see many special agents in the country districts, in time, and we shall develop standard methods. They will serve smaller areas than counties, for the county is a too large division for personal work. The way in which the farm bureau is actually organized and administered, or how it is worked out, however, will make all the difference between success and failure. We should understand the nature of the needs, and also some of the dangers of particular kinds of organization.

WHAT FARM AGENTS ARE

Farm agents are of many kinds. A prevailing idea seems to be that an expert shall go into a community and give advice to the farmers on the running of their farms and on all sorts of agricultural subjects, being teacher, inspector, counselor, confessor, organizer and guide. Anyone who really knows the rural situation also knows how far such an agency will work.

Another form of locality work is the settling of a man in a community to study certain specific agricultural business conditions, as, for example, the management of the farms, the condition of the live-stock, cooperation, the market deficiencies, or other commercial questions. He may be em-

ployed by a group of farmers working together or by a business association.

Other local representatives give first attention to the human or social problems, as recreation experts, agents of the county work of the Young Men's Christian Association, and the like.

Many local applications proceed from institutions and departments, although they may not be resident community agencies. In New York, the inspectors of the State Department of Agriculture and the follow-up plans of the institutes, the outside work of the State Experiment Station, the extension and locality work of the State schools of agriculture, the teachers of agriculture in the public schools, are examples of various excellent special activities in the farming regions.

One kind of local agent is a resident representative of a particular public institution, standing in the locality for the work of the institution. In New York, for example, the State College of Agriculture has representatives of this kind in the counties. By the terms of the law, the State College of Agriculture is "to conduct extension work in disseminating agricultural knowledge throughout the State by means of experiments and demonstrations on farms and gardens, investigations of the economic and social status of

agriculture, lectures, publication of bulletins and reports, and in such other ways as may be deemed advisable in the furtherance of the aforesaid objects." To make this work of the greatest use to the people of the localities, it is essential that there be certain persons in these localities who will acquaint the College with what needs most to be done by the College and who can arrange for demonstrations, conventions, and the like. Such person is not necessarily a farm-bureau man and may or may not give expert advice. He is preferably a practical farmer living on his farm, who is in touch with the local situation so far as extension work is concerned. He is a spokesman, representing both the institution and the people. If a regular farm bureau were organized in his region, he would probably still be needed as a local representative of the extension work and the one should in no way interfere with the other, and they ought to work together. After a farm-bureau man becomes thoroughly acquainted with his territory, he should be of great service in such extension enterprises.

Another type is represented by the so-called industrial fellowship or investigatorship. There are a few of these fellowships in New York. They are supported, so far as direct appropriations of

funds are concerned, by the people of a locality, or of a society representing them, or by a concern or corporation. The locality contributes, say \$1,000 a year, to secure such a man and pay expenses to work on one problem or line of problems. The man is chosen by the State College of Agriculture and is part of its regular staff, usually being a post-graduate student who is working for his advanced degree. The money for his salary is paid to the institution in advance, so that he is responsible only to the institution and he is free to do scientific and impartial work without fear of endangering his support. He spends part of his year at the College in his advanced studies and the remainder actually in the field in investigation. He may investigate a disease of peaches or of apples or of hops, insect troubles, soil difficulties, or other problems of the particular locality. He has an office and a laboratory in the field. He devotes himself to his line of work, although he may incidentally be able to give much advice on other subjects. He is not established permanently in any place, but only until the particular problem has been solved or sufficiently studied. These field-laboratories, with a mutual relation between the institution and the people, represent one of the most direct types of local work. Such an arrange-

ment places an expert under guidance and at a moderate price in a locality for the purpose of studying a special problem; it rests the responsibility of support on the people themselves, thereby giving them a right to be interested in the work and also insuring that they secure the benefit from it; and it is so flexible that no locality need feel that the work is beyond its reach.

Still another type of local effort is the survey. The soil survey is an example. Experts in soil-mapping traverse a county or other region somewhat rapidly for the purpose of discovering and locating the different types of soils, much as the geological features may be reported and mapped. Several of the counties of New York have been soil-surveyed. These surveys are now made by cooperation of the United States Department of Agriculture and the New York State College of Agriculture. With present appropriations, the College can contribute funds for its share of work in about one county a year, and this is now practically the rate of progress. These surveys may be followed by surveys or inventories of farm management, including types of farming, yields, profit-and-loss, and the like; and other special inventories or surveys may well follow these. The survey does not of itself place resident agents in a

community, but it should be followed by local applications.

Just now the prevailing type of local agency is a regular farm bureau established in a village or city and supported by the federal government, the state department of agriculture, the chamber of commerce, and local contributions, sometimes with aid from a railroad or other corporation or organization. It is to these regularly contracted and formal agencies that the term "farm bureau" is now commonly applied and which are understood when the term is used without explanation. The work of the farm-bureau man may differ as between the different farm bureaus. In one case it may be largely propaganda work of a general character; in another it may be the conducting of farm management field studies, in the nature of a farm-to-farm investigation to determine what is the status or condition of the farming in the region; in another it may be largely the making of demonstrations or tests on farms. The agency is maintained for the purpose of upbuilding in general the agriculture of the community. Some of these bureaus give every promise of success.

There are, then, two groups or kinds of local work (aside from police work and inspection),—

the advisory work of a general nature, and inquiry into particular or special problems. The general work may take the form of visiting of farms, or the maintaining of a central office that shall be a clearing-house for information about the region, to which persons may come for consultation on their personal problems. The special-inquiry work may run into commercial affairs, or into lines of investigation in chemical or physical or biological problems of the region.

These are all forms of extension work, meaning by that the carrying of educational methods into the localities and making application of them there. Different forms of extension work appeal to the public mind at different intervals,—it is just now the farm-bureau idea. In other years the demonstration-farm idea has been widely prominent; at other times the farm train, the perapatetic school, the institute work, the traveling library, the correspondence course, and other forms, have been specially popular. All of them have been useful, but no one of them has been better than all the others. I am waiting for the rural survey-idea to find its time, for this is fundamental to all the other forms of locality work: we need to know. The farm bureau will work itself out and we shall know in a few years

what its real value is. The danger of it lies in the patronizing and political and paternal features that are likely to go with it. The safeguard of it lies in placing the organizing features with agencies that understand the rural situation and that have no interests or schemes to push on the farming folk.

THE UNDERLYING CONSIDERATIONS

All these types of effort are good in themselves. Those that endeavor to uncover a subject and to determine reasons and remedies are in the nature of the case the most definite and are likely to secure the most permanent results. They are less flexible than the visiting agents, however, and may not meet the publicity desires of certain groups of the population or of organizations.

There is special difficulty in securing men who can be general advisors on the running of farms. No man is expert in all kinds of farming; and most farmers do not ask advice freely on this subject. Better results are to be expected if the agent pursues a particular line of inquiry or investigation, letting the general advice-giving develop as it will; and he should have an office with records of the territory and be prepared to put inquirers in the way of securing the best information and keeping in touch with new movements. There

is great danger, owing to the scarcity of well-trained men, of securing persons for this very important work who are neither adapted to it or prepared for it. The farm agent should not be what is known as a "promoter."

Of course, I am thinking of farm-bureau work for the express benefit of the real open country rather than for the extending of the influence of a city or town or the building up of its industries. We must keep this distinction very clearly in mind. Both purposes are important, but only one of them is real farm-bureau work.

I would not have the farm-bureau movement extend more rapidly than the good farmers themselves want it and are willing to use it. It will not only fail of its greatest application if it is premature, but I am afraid that the tendency will be to lessen the initiative and responsibility of the farming community if the enterprise is projected from the outside or from a more or less benevolent source. I have not been particularly anxious to see it pushed: I should rather see it grow.

The exploitation of institutions should be no part of a farm-bureau enterprise: the institution should exist to meet the needs of the localities. It should not be undertaken to "boost" any organization or any city or town. I suspect that the

results will be better in the end if the growth is somewhat slow but wholly natural, than if it is rapid and somewhat forced by organizations and movements practically exterior to the farming folk themselves. I am fearing a reaction from some of the present farm-bureau work in this country, and perhaps a collapse in some regions; and in this event the last state may be worse than the first.

I am afraid, also, that advantage may be taken of the present state of the public mind in the United States to extend and fasten political organization by means of agricultural work. It is of the first consequence that agricultural development be kept wholly free of personal and partisan politics. It is a question, for this reason, whether a congressional or county limit is the best geographical basis. A uniform agricultural situation is that centered about a shipping-point or market town.

It is very important, also, in any State that the administration of farm-bureau work be definite and well understood, if any funds other than those of the community are to be contributed to it. There should be State responsibility, resulting from a carefully considered State policy or plan. The movement should be related to existing institutions and agencies. At present the work lacks unity and organization on State bases.

Every farm bureau should have behind it an organization of real farmers, an organization that contributes so much money to its support that the farmers will feel it, and that constantly keeps in touch with the bureau and provides a way of disseminating the ideas and the information issuing from it. It is not a question of "getting something" for a locality: it is a question of doing something. I know it is hard to resist the temptation to secure money that is offered and is going the rounds; but except in very new or disadvantaged localities, I should think it would not be justifiable, from the agricultural point of view, to develop a farm bureau unless the farming people want it, contribute to it, take part in the management, and are willing to stand behind it rather than merely to look on. When I speak of the farming people I mean the people who are on the farms and who are making their living directly from the land. It would be better if these people should themselves choose the expert; at all events, they should have an important voice in the matter. They should arrive at a definite understanding of what they desire to accomplish. They should know whether they want supervision, inspection, police work, business organization, or an educational agency. After all this is done, they are in

position, in any State, to utilize most advantageously the assistance that the State department of agriculture, the State experiment station, the state college of agriculture, the United States Department of Agriculture, or other institution or agency can give; and I see no danger, in that case, in securing outside public funds to aid in support or extension of the work.

THE ULTIMATE RESULTS

All this is a very different conception from imposing an enterprise on the farm people by outside or overhead agencies, however good the enterprise may be or however useful and effective are the organizations and institutions themselves. Even at the risk of going somewhat slowly, I should like to see this local work for agriculture develop so far as possible out of agriculture itself, letting the localities ask for outside help when they are able to help themselves. It must be remembered that the chief good to be secured from such agencies is really not the information that is spread by an expert, but rather the development of responsibility for their own results on the part of the people themselves. We should not be forever asking someone else to carry our natural responsibilities. I shall be disappointed in my estimate

of the independence of the farming folk if they are willing to receive this work as a gratuity.

It is replied, I know, that the farm-expert movement is now on and that we ought to take advantage of it: I should like to use it to stimulate genuine background movements, but not to take too much advantage of it, particularly not in a spirit of opportunism. The best effort should be made to turn it into permanent benefits by up-building a spirit of self-help in the communities. I am much afraid that the placing of ready-made enterprises and movements of any kind in the communities may result in the end in undesirable effects on the general attitude of the people.

There are, of course, regions and cases in which the situation is so backward that new life must be taken into the community from the outside; but the longer I study rural conditions the more am I convinced that there are better human resources in even the disadvantaged regions than we realize, if only we can discover them, stimulate them, and bring them together for work. Naturally, the outside contribution of funds should be liberal in such cases. It is said that many farming communities would never move if left to themselves; but there are ways by which suggestion and guidance can be applied to such communities

that will cause them to act in their own interests. It is really a question in the end of allowing our educational processes to take hold and to work themselves out.

I admire the public spirit of chambers of commerce and other agencies and organizations, and I am convinced of their desire to do the best thing for the agricultural districts; the interest that business men are taking in rural affairs is gratifying and helpful; it is good to see the urban communities recognize their responsibility to the rural welfare; I want to help all of them all I can: but I have my doubts as to whether much of the effort now projecting in this country is going to be the best thing for all concerned in the long run. We are beginning too many of our processes at the wrong end, and we are too much impressed with immediate results.

If you are thinking of organizing a farm bureau (and I hope that you are thinking of it), then I want to ask three questions: Just what do you desire to accomplish? From what point or direction should the movement arise,—from the farming country or from the town? Should the nature of the enterprise be voluntary and educational, or should it be political and paternalistic?

XX

THE FARM RESIDENCE

*Noon address to students, New York State College
of Agriculture, November, 1910*

IT is my constant reiteration that country-life affairs must be quickened. These affairs and interests are of two general kinds—those that appertain to the community as a whole and those that connect directly with the farmer's personal life and business. All country-life affairs have been inadequate as measured by their possibilities and by the expansion of civilization at large. Institutions and affairs become crystallized and stationary, and it is only by readjustment that we are to grow.

The process of re-direction has actively begun in a number of country-life institutions, so that we no longer need to point out their deficiencies so much as to aid to shape up the readjustment that is now in progress. That is to say, the forces are beginning to concrete themselves and to work out a solution. This is particularly true with the country school, the colleges of agriculture, the

country church, the country highway extension, and the spread of means of communication. In other avenues, the re-directing forces have scarcely yet taken hold.

THE FARM PLAN AND THE HOUSE PLAN

On the side of the individual farmer, the process of re-directing his whole farm scheme is now well under way. By means of direction, aid, and sympathy, a new farm plan will work out, in cases where it is needed, although it will still take considerable time.

I come to you this noon to challenge your attention to one other factor in farming that needs to receive a new kind of thought. I speak of the farm residence.

Farming is a business system and like other business systems it must have a center. The center of the farm business is the residence. When we touch the farmhouse we touch the very center of rural life, because we reach the family life. It is just as much a problem to reorganize the farmhouse as it is to reorganize the farm itself.

Our farmhouses were mostly built many years ago. The older ones were adapted to a former kind of country life and to a type of farming that

is gradually changing. Many of our older houses are gradually falling down. Many farmhouses are all that can be desired; but the larger part of the establishments in New York State must be either thoroughly remodelled or else rebuilt within the next twenty to forty years. It is very important, therefore, that we do not follow old lines of house-planning and construction.

Of course, I do not mean that the farmer is to discard his residence until such time as he desires to do so, and certainly not until he feels that his income warrants him to make a change. My point is that as fast as the farmhouses are rebuilt or reconstructed, certain new features must be incorporated into them. Neither do I mean that the farmer must build expensively. An inexpensive house may serve its purpose in the class of construction to which it belongs, and it is as easy to make it convenient as to make it inconvenient.

The farm scheme has been largely traditional, fields being added as the forests have been cleared, and these fields tend to remain year after year. A modern farm management obliterates all unnecessary limits and lines and makes a new plan of the whole property. Similarly, the farmhouse has been very largely traditional in its plan and

construction. A familiar type of house is the long upright-and-wing, with the kitchen at one end and the living rooms at the farther end, and with perhaps the cellar under the upright or parlor, necessitating much travel. Only a part of the house is warmed, so that the living is nearly all concentrated in the kitchen and one or two rooms adjoining it. Any rambling type lacks the concentration that is needed in middle-class new houses of the present day.

The introduction of water-works, the difficulty of securing household help, expense of heating, the removal of the handling of milk from the residence in many cases, and many other changes, have made a new design of farmhouse quite as essential as a new plan of the farm business. I think that town houses need just as much to be re-directed as country houses; but I am not speaking of town problems.

There has been a tendency in recent years, when new houses are to be built in the open country, to adopt city models. The house that is narrow and high of necessity in the city, and which serves city conditions very well, may not only be very gawky and unsightly in the open country but may entail much unnecessary labor in running up and down stairs.

WHAT A FARM RESIDENCE SHOULD BE

By way of concrete suggestions, I will throw my statements into classified paragraphs. These suggestions apply to common farmhouses, rather than to the estates of country gentlemen.

(a) The farm residence should fit the farm country. Land is cheap, household labor is difficult to secure. The house should be broad and low rather than narrow and tall. We need a type of farm architecture that seems to grow out of farming conditions. That is, the structure must look like a farmhouse rather than like a town house.

(b) The house should be very simple in its general plan and construction. This is true of all houses, but particularly of country houses. The farmhouse should be condensed, whether it is large or small. A general absence of jigsaw trimmings, lathe work, gewgaws, and other mere ornamentations on the outside of the house would not only eliminate much expense in original cost and in upkeep, but would also relieve the structure of much that is commonplace, tawdry, and of no account. The beauty of a building lies not in its external ornamentation, but in its proportions, its fitness to conditions, in the materials of which it is constructed, and in the

excellence of the workmanship. Nothing presents a sadder appearance than a very much ornamented house when it once begins to become shabby and to go to pieces; and all merely ornamental work is short-lived, and requires constant attention to repairs and painting. A neglected simple house presents a very much better appearance than a neglected ornate house. Very often, the barn is really better architecture than the elaborate residence.

(c) The ordinary farmhouse should have a very simple roof scheme, with as few valleys and peaks and flashings as possible. The beauty of the house should lie in its dignified and simple sky lines rather than in its complex and broken and ostentatious features.

(d) The house should be planned to save steps to the utmost. It must be remembered that a residence is a working place. The kitchen, dining-room, woodshed and cellar should all be within easy reach of one another. So far as possible, the rooms that are daily used together or between which there is very much travel, particularly on the part of the housewife, should be on the same floor with no steps up and down. We have not appreciated the fact that the woman's steps cost time and strength and, therefore, cost money and

health and good temper. We should so plan a house that the woman may be able to save much of her energy for other activities than merely those of housekeeping.

(e) The house should be so planned and made that it can be easily cleaned. This means absence of all elaborate spindle work, filigree, and also of heavy and upholstered hangings in the furnishings, and of useless corners and of eccentricities. Now that we are appreciating the relation of dust to health and disease, we must take a new attitude toward the construction and the furnishing of residences.

(f) The house should be constructed or remodeled with the idea of applying power to some of the household work, as to the laundry, dishwashing, pumping, eventually to the cleaning of the rooms and to other labor. We have been applying power to the work of the farm and the barn, but we have not adapted it to any great extent to the work of the house itself.

(g) Every modern house should have water running into it and out of it; and the supply should be abundant. Within twenty-five years every good farm residence, and even many tenant houses, will be as well provided with water-supply facilities as are city houses. In fact, since the

farmer can secure his water without paying water tax or being subject to water boards, he ought to be able to control the situation much as he will.

(h) The ordinary farmhouse must be planned in such a way that the members of the family can do the housework. They do not depend on servants. I am sure that in many cases it is possible to reduce the work of keeping house by at least one-quarter or even one-third if the house plan is carefully studied with this idea in mind.

(i) You all know that most of the unexpected visitors to a farmhouse go to the back door or side door. This is because the woman and the family are at work in the rear of the house. There may be no servant to "tend" the door. This being the case, it is necessary that the secondary or back door entrance be much more important and convenient than it ordinarily is in a farmhouse. It means that the back of the house is to be as highly developed in some respects as the front. Perhaps it will mean in the end that there really is no "back" to the house at all, and that the establishment shall "face" all ways and have no unkempt back yard.

(j) The house must be provided with ample storage space. Groceries are often bought in

quantity. The winter's supplies are "put down" in the cellar. In many places this storage space should provide room to hold vegetables, fruit, and other supplies, that are to be sold. Ordinarily, the larger part of this storage is in the cellar or the attic. This necessitates many steps. It is a question whether a good part of the material would not better be stored on the first floor with a place specially designed for it, like an enlarged closet. One way to reduce the cost of living is to put things in store, and not to live from grocery to table.

(k) The first floor and the cellar are the centers of the family activity. The members of the family spend much of their time out of doors. This means that the first floor should not be approached by high steps from the outside, and also that washrooms and other service rooms should be on this floor and easy of access, and preferably near the farm-side entrance. The men from the barn or fields should not be obliged to run through the house to reach their conveniences.

(l) When additions are placed on an old house, care should be taken to have them match the style of the original. It is common to find old box-corniced houses with turning-lathe spindle-shanked porches added to them; these additions

always look out of place and sometimes are ludicrous. If left to the whim of the ordinary carpenter, additions to residences are not likely to present a suitable appearance. The patched-up appearance of many country houses is due to this lack of harmony between the additions and the original structure.

(m) And lastly, the residence should be constructed of good materials. The pioneer epoch and the days of temporariness have passed. By this time in York State the farming conditions should be sufficiently settled to allow us to build understandingly. Cheap materials lazily or hastily put together are not in keeping with a permanent farm property; and buildings so constructed are most expensive in the end. It is difficult to repair or to expand such structures. It is better to build small or in part rather than to build loosely and weakly. With the hollow tile and cement and similar materials we may now consider the building of fireproof farm residences.

A SET OF PROBLEMS

The above categories will suggest problems for the student to work on, but I will mention a few specific things for those of you who are interested in house-planning to take directly into your class-

work. Of course I do not assume that all these things are to be incorporated into one house (although it is perfectly feasible to do so), but while you are here you should work out one or two of them at least, for application at home when you can afford it.

(1) Plan a water-works system with a supply coming from an elevated tank in the barn or in the attic; from a pneumatic tank in the cellar; from a pneumatic cistern; from a creek or a well or a spring at an elevation above the house; or from a hydraulic ram; or from other source.

(2) Plan a compact room-arrangement to allow a woman with two or three children to do her work without servants, and also to have some time for reading and for social activity.

(3) Consider how a hired man may occupy a room which has a separate entrance from the remainder of the family and yet which may be under family control.

(4) Plan the addition of outdoor sleeping facilities.

(5) Add a fireplace to an old farmhouse.

(6) Plan a house with an accessible and attractive back-door or work-door entrance.

(7) Plan a lighting system, either by acetylene gas, electric light, or other means that may be

available. Extend this system to the barns, if practicable.

(8) Devise a way to heat the house. Provide for the heating of a residence with one stove.

(9) Plan a laundry-room in basement or elsewhere, with power and conveniences.

(10) Plan a plain workroom or retiring-room for the women of the family, particularly for the wife and mother. This should be a retreat-room that is free from the cares and noise of the remainder of the house, containing perhaps a few books and other means of recreation.

(11) Provide an office that shall be the business nucleus of the farm scheme. This office should be of easy access on the first floor of the house rather than in the attic or in the barn. It should be easy to add such an office to almost any farmhouse. It should have an outside entrance as well as connection with the living rooms.

(12) Calculate a system of storage-rooms that will take care of the family supplies, and also hold such products as need to be sold or handled from the residence, assuming that the family is six persons and the place a general farm of 100 acres.

(13) Plan the simplest and most compact arrangement of rooms properly to accommodate a family of six, on a 150-acre farm.

(14) Devise a system of light power that can be applied to household work, and indicate the kinds of work that may be effected by it. The plan may contemplate a water-power outfit, windmill, gas or hot-air engine, or an installation through electric wires.

(15) Plan a garden or yard that shall be a real supplement to the house. I do not now have in mind so much the raising of vegetables and fruits for the household supply as the providing of pleasant outdoor spaces for reading, sitting, dining and the like. Every opportunity should be seized to get the farmer and his family out of doors, as contact with nature in the hours of leisure will add much to the resourcefulness of his life.

STANDARDIZED HOUSES

We very much need standardized plans for farm dwellings. Such plans would indicate the nature of the problem, how all the parts of the residence are related to each other and to the needs of the family, and to the needs of the farm.

We are now working out standard schemes of farm management. It is not expected that any plan will be literally followed by any particular farmer, but it is possible to study the principles that underly a farm organization that shall be

economically most feasible. Similarly we ought to have such a knowledge of the household necessities as will give us some rather definite working statements on the best general arrangement of rooms, the floor space to the person, the size of the house in relation to the size of the farm, how large one kind of room may be with reference to another kind, the proportionate outlay that may be devoted to house and barn and to the farm. I do not have in mind the ready-made plans that we see in the public prints, but rather a set of working principles. A person ought to be able to apply these principles at the same time that he expresses his personal tastes and varies the plan in its details.

Such standardized plans are not likely to be worked out by practising architects, because the fees in farmhouse work are so small as not to make the business profitable. It then devolves on society to make such studies, and to develop the work. That is, the government must do it through some agency. At present, the only agency that seems to be available is the system of colleges of agriculture in the different states. If it is true that the character of the farmhouse is to have great influence in the re-directing of country life, then it is very important that every

college standing for such re-direction have a first-class department of rural architecture.

OBJECT LESSONS ON THE UNIVERSITY LANDS

If all these points of view are well considered, then it follows that this College of Agriculture should begin, as soon as it can, to work some of them into actual farmhouses. We have recently purchased a number of farms. They have residences of the old kind. Some of them may be rebuilt. We shall need new buildings in other places. We shall, of course, need more buildings than a farmer would need because of the different kinds of work that we are doing. We could use the extra rooms in many of the buildings for assistants' and students' quarters.

I have long wished that we might begin to erect different kinds of farmhouses on our various farms to stand as suggestions and examples, ranging from the lowest price of farmhouses to those of the larger size. Every house should be a standard in its class, with good sanitary conditions, water-supplies, and a useful garden attached to it. Here is an opportunity for the expenditure of small sums of money that will be sure to give most excellent results. A building stands not a day, but year in and year out; it is

a silent teacher, and its influence is greater than any of us is aware.

THE MENTAL PICTURE

As I have said in the course of this address, I do not expect all this to come quickly, or before its time. I want to challenge your attention, to set you thinking along unc customary lines, and to place in your minds a new picture of home and efficiency.

XXI

THE HILL LANDS OF NEW YORK

State Agricultural Society, Albany, Jan. 19, 1911

THERE is much discussion as to the nature and the future of the hill lands in the State of New York. The situation is now to the front because it is commonly assumed that the probable lessening population of the hill country is related in some way to the cost-of-living question. The question, therefore, is not alone the solution of a technical agricultural problem, but of a very real economic and social issue.

WHAT THE HILL LANDS ARE

The term "hill lands" is loosely used to designate the more elevated farming regions of the State. If one were to ask for a numerical measure, he might say that the hill lands comprise those agricultural parts lying approximately above one thousand feet altitude; and these lands are mostly of low or difficult productivity, being very largely of the Volusia silt loam series.

It is impossible, however, to give any exact definition of the area that is meant by the "hill lands." In general, these lands comprise the high elevations, and sometimes the intermediate elevations, in the hill-and-valley region of southern and eastern New York. In this great region there are wide and fertile valleys, and there are also narrow valleys. These agricultural valleys ordinarily are not included under the denomination of "hill lands," although in some cases valleys may be so narrow and parts of them may be so high that the condition calls for an essentially hill agriculture. It is probable that not less than one-fifth to one-sixth of the total area of New York may be denominated agricultural hill land. From this estimate, of course, the mountains (as the Catskill and the Adirondacks) are excluded.

The "hill land," however, does not represent a place or a geography, but a problem. It represents a type of rural condition brought about not alone because the lands may be elevated above the sea, but also because of soil conditions, of climate due to altitude and exposure, of remoteness from market, of poor highway facilities, of great distances between neighbors, of poor and distant schools and churches and other institutions.

The situation with reference to highways is particularly significant. The main routes run through the valleys. They connect the cities. They become thoroughfares for overland travel by automobile and otherwise. Typical hill lands are difficult to reach, and the highways are relatively very little developed. If the hill lands are to be brought into an increased state of productiveness, it will be necessary that more attention be given to the side roads and the hill roads. Good dirt roads, following proper grades and with the best type of form and layout, connecting with the valley thoroughfares, will probably do more than any single thing to make the hill lands more useful to their occupants and to society. I am mentioning this particularly now in order to enforce my statement that the "hill lands" represent a problem and not merely a locality on the map.

WHY THE PROBLEM IS RAISED

The "hill lands" become a problem because of the shift of conditions that has resulted in the drainage from these areas of fertility and men.

We have been living in North America in a new-land society, with all the marks of exploitation and shift. As rapidly as we have sold the

ready-to-use fertility, we have moved on to new lands to repeat the process, and have then moved on again. In any social flux, it is natural that the most difficult regions should be drained first, or, if not drained first, at least drained most disastrously. It is natural that persons should move to more fertile and more easy land and that the remoter and more stubborn lands should be passed by or deserted.

In the east, these remote and stubborn lands had been settled before the opening of the Great West. They were settled before the cities began to call in the people from all parts of the open country. They were settled largely before railroads and factories and commercial enterprises called for strong, fresh blood. It is the most natural thing in the world that the people have been moving down from these hills.

The problem of the hill lands, therefore, is not only a problem of lessened agricultural efficiency, but an expression of the shifting basis of our civilization.

I would not have any one understand that the hill lands are in any rapid process of abandonment, or that the people are all moving away from them. These hills are populated. Some of our best people live high on the hills. Some of the hill

lands are well farmed, but some of them are in the process of passing back to nature or at least of being less utilized than formerly. Even when not effectively used, the land belongs to somebody and is under somebody's general supervision. It does not necessarily follow that, in order to secure better agricultural results on the hills, we must increase the population to any extent. The capacity of the individual farmer is increasing: this is why we are able to maintain our civilization at the present day with a much less proportionate agricultural population than we have had in times past; and it is the reason why this proportion will still decrease.

THE UTILIZATION OF THE HILL LANDS

We cannot expect to utilize the hill lands in the old way. If the old way were the proper way under our new economic conditions, then the people would not have left them.

We know how to make these remote and stubborn lands produce better crops; but merely to produce such crops may not be any solution of the situation. Because a man may be able to raise 250 bushels of potatoes to the acre on a remote hilltop, it does not follow that it is profitable for him to raise them there; or, if it is

profitable, it does not follow that it would be best for other persons to buy land in that region for the purpose of growing potatoes, when by much less effort he could produce the same results on other lands. We must remember that in any intensive agriculture it costs more to till the hill lands than to till valley lands; and we must also consider the expense of the hauling to and from the market, and also the expense of the up-and-down moving of tools and animals and materials on the farm itself.

We must re-conceive the situation and endeavor to re-shape it. We must think of an organized farm life arising out of these remoter localities. The human problem is, after all, the fundamental problem in the situation.

Merely to place other families back on the old farms, therefore, is of itself no solution of the problem. This may be a very desirable thing to do on particular farms and in particular localities; but, as a broad public policy, it is not reaching the situation. It is still less than reaching the situation when we attempt to put on these old farms a more ignorant population than has passed away from them.

In the greater part of the real hill region, a more extensive plan of farming, rather than a

more intensive plan, must be thought of. We must organize the business into larger units. We shall need larger farms rather than smaller ones. We must reduce the process of tillage to lower terms and we must elevate the skill of management to higher terms. It will require good generalship to handle the hill lands effectively.

Of course, it is our duty to do everything we can to aid the man who now lives on the hills, in order that he may make the very most of his opportunity. This means in most cases that we give this man instruction in technical farming, showing him how, by better tillage, better fertilizing, better selection of seed, better live-stock, and other ways, he can make more money from his farm. It does not follow, however, as I have suggested, because we do this, that we are to recommend a continuation or duplication of the same condition, or that we are necessarily to recommend other men to "farm it" in the same way on remote and difficult lands.

The hill lands are now vastly unproductive. This is in part due to soil, in part to climate, and in part to bad farming. There is every reason to expect, however, that these lands can be made to yield many times as much material as they are now producing. This will call, of course, for

more labor and an increased population; but it may not call for a population increasing in proportion as the productiveness increases. I suspect that under good generalship, large areas of the higher and remoter lands could actually be made to sustain more local population than they are at present sustaining under the small-farm division. There are many areas in the hill regions in which the small farm can be made eminently productive and profitable; but I am speaking of the hill lands as a broad class, those parts that are not easily productive and are in process of being less used.

I would not in any way depreciate the value of strict agricultural advice and oversight for these high and thin lands; but what we now need is a program.

In a general way, nature gives us the hint as to the best means of utilizing the present unproductive hill lands: they grow grass and trees freely. It is probably through grazing and stock-growing, on the one hand, and through forestry, on the other hand, that the best utilization of most of the typical hill lands will be found. Tillage, and labor outlay, on each acre must be reduced to the minimum, except perhaps on such parts of the hill farms as lie in valleys or are

otherwise accessible and fertile. On some of the intermediate levels in more or less protected localities, it perhaps will be found profitable to grow apples for the general market and for export; but this probably will require a different system of orchard management from that which obtains in the highly developed fruit regions.

SPECIAL RECOMMENDATIONS

Very little usually can be done in the way of legislative enactment to enable us to utilize agricultural lands to better advantage. It is mostly a matter of education and of publicity. In these days, any proposed public movement quickly gains headway if it is made known to the people. If there is anything that can be done to rehabilitate little used lands, the first step is to state the case. The people, the railroads, the real estate agents, the localities, will set the work going. Publicity has become a powerful agent wholly aside from legislative action.

We must begin to talk less about the abandonment of lands than about the utilization of lands. It is well to let the people know where the cheap lands are, what they are capable of producing, and what are the possibilities of developing good homes among them. For myself, I have the

greatest faith in the so-called hill lands, even in those that are remote and difficult; but I prefer to let the utilization of them wait, rather than to start a movement that would occupy them only temporarily or on a wrong economic basis. They will all be utilized in time. They now constitute our reserves. Naturally the best lands will be utilized first, and we need to use all lands more effectively than at present. The movement back to the remote places will come slowly, and I am willing that it come slowly if only it comes soundly.

I do not think that the utilization or non-utilization of these hill lands bears any very close relation to the present cost of living. I am interested in their development as a part of a permanent welfare problem, and as a means of developing and utilizing the natural resources of the State, and as a contribution to the evolution of a good rural life. Specifically, I suggest as follows:

(1) We must first have an accurate measure and picture of the situation. We should know exactly what is the condition of the so-called hill lands, whether the population is decreasing, why, the nature of the land itself, highways, relations to market, the character of the schools, the churches, and other institutions. This local

knowledge must be gained for all our agricultural area, whether in hill or valley, but it is specially needful just now that it be secured for the more difficult regions. We must know what we are talking about. The productive and thrifty regions are better able to care for themselves than are the disadvantaged regions.

(2) We now need a number of experiments on a somewhat large scale with the management of the typical hill lands. We do not know what kind of a farm scheme shall be evolved to produce the best business success. We know fairly well how to utilize the valley lands in such a way as to be profitable, particularly when these lands lie within easy reach of a milk market. Whenever we can combine hill lands with good valley lands, there should be little difficulty in making a profitable use of the property. In the typical hill lands, however, so situated that there are no milk market facilities and no accessible valley with which they can be combined, the business constitutes a special problem; and this problem needs special investigation. There ought to be at least a half dozen demonstration farms on the hills in different parts of the State representing different soil types and different market conditions. These should not be "experimental farms" in the ordinary

sense, but business enterprises with which regular book accounts shall be kept and in which all the elements of a complete farm shall be organized directly on a commercial basis. How far, for example, is it possible to go with sheep on these lands? What sizes of areas, what character of land, what subdivision of the property, how much plow-land, how much labor, what equipment in machinery, what outlay in capital, are necessary to make a sheep farm or a cattle farm or other kind of farm profitable on our little used hills? These are examples of questions that no one now can answer. The public institutions should be set at the question of answering them. These institutions are the proper public agencies to work out fundamental answers.

In suggesting demonstration farms, I am not thinking of tests of crops of one kind or another: this can easily be arranged on fields of many existing farms; but I have in mind the study of an entire farm scheme or plan for the particular purpose of understanding this special problem of the hill farms.

(3) The utilization of the higher, poorer, and more difficult lands for the growing of forests is undoubtedly now to be considered a question of public concern. According to Hon. James S.

Whipple, about twenty-seven per cent of the State is under forest cover. From a recent report made by Colonel Fox to the National Conservation Commission, I find that the forest area of the State is as follows:

Total land area of the State.....	32,129,920	acres
Area cleared (farms and pastures)...	22,649,328	"
Treeless land (marsh, dunes, etc.)...	321,299	"
Forest area (containing merchantable timber).....	10,709,973	"
Forest area (non-merchantable timber).....	2,141,994	"
Approximate area in woodlots (comprising a part of the area included in farms and pastures).....	2,267,932	"

Of the timber land cut over each year, 5 per cent is cleared and put into farms.

The larger part of forests, whether privately or publicly owned, is nowhere near as productive as it ought to be. Very few farmers have any conception of the management of a woodlot as a piece of farm property bearing a crop. Nearly all the forests grow as they will, with profitable trees and weed trees, with productive places and unproductive places, and with no rational management. The wealth of the State undoubtedly can be greatly increased by good instruction in forestry, as well as it is increased by good instruction in potato-growing, corn-growing, milk-

making, trucking, fruit-growing, stock-breeding, and other agricultural subjects.

I think that counties, and, in some cases, perhaps, towns, might well own land for forestry development. If there is much hill land in a county, the county unit ought to be large enough to call for the services of an expert. These forests in time ought to be made a source of revenue to the county at the same time that they provide the best utilization of the land, and conserve water supplies, and add to the interest and attractiveness of the region.

I think that we should now have legislation* touching the forest situation in New York State. My first suggestion is that the Legislature exempt from taxation for a series of years a given amount of woodlot on every farm of a certain size, on condition that the owner satisfy certain requirements as to the management of the area. Timber occupies the land for a great many years before it produces revenue. The land should not be taxed until the crop is ready to yield an income.

My second suggestion is that the Legislature enable any town or county to acquire and hold land and manage it as a town or county forest.

*These matters have subsequently received attention by the Legislature. See Chapters 249, 363, 444 of the laws of 1912.

There should be provision at the same time for a State system of forestry and the town or county forests should become a part of this developing system.

CONCLUSION

My contention is that the hill lands constitute a real problem, in which all the people must be concerned. The problem cannot be overlooked. It is now time that a regular State program or policy be outlined and set in motion. We especially need (1) good agricultural surveys of the regions; (2) several demonstration cost-accounting farms; (3) careful attention to highway approaches; (4) a regular program or system of forestry management.

XXII

THE COST OF LIVING

Before a men's club, Buffalo, Dec. 10, 1912

IT is probably impossible to make a very close analysis of the reasons for the increase in the cost of living. This is because the subject is so very complex. There is no single cause for the condition, and, therefore, there is no single way of remedying the situation.

Some of the important or prominent factors involved in the situation may be placed into three groups: (1) Cheap gold, which means less purchasing power of money; (2) the rise in the standards of living and change in method of conducting the home; (3) inequalities and deficiencies in the serving of the people by means of transportation and selling. Of course, any improvement in the general economic condition of the people, as by better practices in agricultural credit, will influence the situation, sometimes profoundly.

I am not a student of the situation, but I naturally have developed some points of view touching those elements of the problem that are more

particularly concerned with agricultural production and with the organization of a household. I have not been greatly impressed with the larger part of the suggestions that appear in print for the solution of the problem of the high cost of living. In fact, I suspect that the situation is unsolvable in the ordinary sense. The increasing cost of living is not an American question alone. It is a natural result of the economic and social conditions in which we live. The revision of the tariff, or the sending of more people to the land, or any other of the score or more of remedies that are commonly suggested, will not have any very great effect in themselves in relieving the situation. We must adjust ourselves to new conditions and regulate our incomes and outgoes by new standards of measurement. Of course much may be done to correct the glaring inequalities, but the increasing cost of living is really a phenomenon of the times.

THE FARMER'S RELATION

It is impossible to throw the responsibility of the high cost of living back on the producer. The producer is also a consumer. If the farmer secures higher prices for his products than he did a few years ago, he also pays more for his home

supplies, for feed, fertilizers, labor, and for practically every item that enters into his business. The first fertility of the land is mostly gone. The ox-team is a curiosity. The women do not like to drive to town in a lumber-wagon. The farmer's standards of living have increased with the rest. The farmer is also the man who takes the risks. After the product leaves his hands, every one else takes a toll of it, and he receives what may be left. A farmer shipped 41 baskets of fruit. In due time the transportation company rendered its account. The returns indicated three baskets short or unaccounted for. The 38 baskets were represented to have been sold for \$17.75. The transportation charges were \$13.09. There was a telegram that cost 50 cents. The farmer received \$4 16 net. This would not pay for the baskets and for the labor of picking and packing. I do not know that the transportation company or anyone else received more for the service than it was worth; but the point I wish to make is that nobody lost anything in this transaction except the man who put his labor and capital into the making of the material. A farmer will haul his produce five miles to market and put it in a grocery store; and the groceryman sells the material within a few hours and takes a commis-

sion representing a greater assured profit than the farmer can expect to make on the produce. Farmers at a public market were receiving 65 cents a bushel for a product; a few blocks away it was selling for 15 cents the quart. These are random illustrations of a general condition as it affects the farmer.

Some of the inequality between such selling prices and purchasing prices as are mentioned above, may be due to natural waste and shrinkage and to unsold remainders. Some of it may be the result of faulty grading and packing at the farm. Any movement to make dealers more responsible for sales and accounting should be coupled with the effort to make producers more careful and dependable.

The public does not sufficiently understand the risks that a farmer takes in the natural prosecution of his business. He not only has the ordinary business risks, but he has also risks of flood, drought, hail, lightning and wind; of serious diseases of animals, crops and orchards; and the risk incident to the planting of a crop that cannot be delivered until several months in the future and sometimes even several years in the future, at which time the market conditions may be completely changed. One who plants an apple

orchard, for example, plants for a market twenty years and more in advance. In the meantime, he is not able to shift his stock-in-trade as a merchant is able to shift the material on his shelves or in his storehouses. For the larger part, the farmer makes long-time investments and necessarily lays out a plan that cannot be greatly modified to meet fluctuations in the market. If the price of milk should fall, for example, the farmer cannot quickly dispose of his herd; for to maintain a herd means the organization of a farming scheme and of an equipment that is adapted to this scheme. If he disposes of his cattle, it then means that he must engage in a different kind of crop farming, and it requires some time to make the preparation and to put the shift into operation. Even with all the increase in the facilities in farming, in better prices and in the improvement of conditions generally, it is a matter of common observation that the farmer is not reaping any proportionate part that the consumer pays for increased cost of living.

The prevailing methods of fixing prices do not sufficiently safeguard the interests of the farmer. The producer probably does not receive on an average more than thirty-five to forty-five per cent of the retail prices of the materials that he

raises. He should receive not less than sixty per cent, and in many products he should receive much more than this. It is commonly asserted that the solution of the cost-of-living problem is to produce more stuff on the farm; but this stuff will not be produced until the producing of it pays. Sending more persons to the land is no solution of the problem. As soon as labor and capital applied to the land produce as much reward as similar labor and capital applied to other business, farm products will increase sufficiently to meet the needs of the situation. This is a plain economic question. Rather than to maintain an agitation for sending more persons to the land, the effort should be expended in securing such a reorganization of trade as will insure to the producer of the raw materials an attractive reward for his effort.

HOME-KEEPING METHODS

We are living at a time when great social and domestic changes are taking place. Many of our present difficulties are merely a lack of adjustment rather than of dishonesty or conspiracy. We are adding many conveniences to the home and the scale of living is being elevated. We want better things to eat, better things to wear, and more

physical comforts. Desires have increased. We demand pure food, tuberculin tests, inspection of dairies and of markets; all this costs money. We demand more service; someone must pay for it. No system of control of markets or prices can be sufficient unless the home-keeping also endeavors to meet the problem.

We are complaining of the high cost of living at the same time that we are demanding more extras and luxuries in the daily routine. The higher cost of food products will force us to a more careful choice of nutrients and to make necessary changes in the ordinary processes of life whereby living will become simpler, more direct, and more economical in expenditure both of effort and money. We shall live better at the same time that we live in a more frugal spirit. The rise of nutrition studies and of home economics work all over the country has come just in the nick of time. We must simplify the processes of domestic life rather than to throw the entire burden of the cost of living objectively on the producer and the trader. The relief from the high cost of living must come from a reduction in meaningless desires as well as in a reduction in prices.

The growing habit to be served is an important element in the situation. It is easy to use

the telephone. We do not inspect the products that we buy. We pay for them by check. The home-keeper may never make the acquaintance of the grocer. The choice of food materials is left to the dealer. Shopping is becoming impersonal. We make ridiculous demands on the shopkeeper in order to save ourselves a few steps or a little trouble. A delivery-man told me a short time ago that he drove three miles to deliver one yeast-cake. A woman was impatient because her two spools of thread had not arrived. She explained that the regular delivery-man had left the store and they were being sent up by a special delivery.

We seem to have lost to a large extent our sense of responsibility toward materials, and especially toward the products that we consume. We do not know where they come from, who grows them, what the varieties are, and we are likely to exercise very little discrimination. We are dribbling out of tin cans. We are developing the habit for delicatessen. The days of the good old cellar are passing, except on the farms. In the cities and towns we are sacrificing kitchen space and good storage place to "dens," libraries and finery. The cellars are basements that contain the heater and are filled with dust and ashes, and the few vegetables and fruits that may tempo-

rarily be stored in them are shriveled and ashamed. We need reorganization of our house-building in towns and cities. We need more storage capacity. In the villages and small cities it might still be possible to return to something like the old-fashioned cellar. In the city lot of good dimensions there is usually space for an outdoor cellar if the house has no cellar available; and such an outdoor cellar might be a more useful part of the establishment than a tennis-court or a fountain. One of the great resources of the farm family is the cellar with the earth or brick floor, that keeps cool and moist, in which there is the barrel of pork or of beef, the storage of potatoes and apples, and many fresh and good supplies that come speedily out of the land. I am afraid that even my farmer friends are too much acquiring the habit of living out of tin cans, bottles, and wooden boxes that are hauled from town.

A good cellar for storage would solve no small number of the difficulties of the ordinary household. It would save not only in the cost of supplies but would also insure their freshness and quality, and it would relieve us of the necessity of much service. I am afraid that our habit in respect to service is not for the better. We seem to be ashamed to carry anything in our hands,

and yet I suspect that our hands were given us for this very purpose. I am wondering what would happen if on some morning we should find that there was no delivery wagon in the world. Would we all starve, or would we put our pride in our pockets and go to the market and serve ourselves? I am wondering whether a new psychology is developing out of the delivery-wagon system.

The introduction of home-making subjects in the public schools will probably have more permanent effect on the situation, if the subjects are developed from the right point of view, than any other single contribution. Such studies ought to impress the coming generation with the essential fact that home-making requires as much ingenuity, skill and intelligence as other kinds of occupation, and that we must give it this intention if we are to secure the best results. Home-keeping demands careful thinking in all its details, but we have been training our young women to think it more worth while to paint a posy on a piece of pottery or to twiddle on a piano than to know how to meet the good problems of life.

THE MARKETING METHODS

All kinds of plans are now being proposed to aid in the distribution and sale of products. This

means that we recognize the inadequacy of our present marketing methods. These methods are crude, awkward, and unadapted to the twentieth century. We begin to see their breakdown. Within a few years we shall find ourselves in the midst of a radical shift.

The organization of consumers' leagues, the development of the home-hamper system of marketing, the agitation for municipal markets, and other movements, all indicate our disapproval of the present basis of trade. Our trade in farm products is the result of custom rather than of system. It is indirect, inefficient and expensive. It is largely hit-and-miss. It is such as to encourage dishonesty and irregularity on the part of intermediary traders. It does not encourage the farmer, nor does it tend to develop the regions about our cities to supply the needs of those cities. One has only to observe the lack of good farming business in the neighborhood or in reach of many of our great cities to be convinced that the development of the long-haul for farm products has been an important factor in our agricultural situation and in the impersonality of trade. It is a shameful commentary on our economic and social system that in these days of great production of agricultural produce in the fertile land of

North America, people still suffer for food in the great cities.

How to evolve order out of the present condition of ineffectiveness and waste of effort is, of course, no easy matter. We must recognize in the first place that marketing of food supplies is practically a public function, and not exclusively a business for private gain. There must be some system of concentration of trade so that expenses may be reduced, better materials be kept, and the purchaser may have the great advantage of comparing many products. The small private grocer's-store ought soon to be a thing of the past in many congested communities. With present methods, it costs far too much to sell food products.

The evolution of the department-store gives a clue. Department-stores for food products undoubtedly could render great service when the populations are of sufficient extent. Municipal markets might become essentially department-stores for food products if they were organized and controlled by one supervising authority, so that the business could be systematized and economized, storage places be provided, and the little retailers eliminated or controlled. In the larger cities the municipality should see that storage for food products is provided. The indi-

vidual family cannot hope to provide the storage that is at the command of the farmer or the dweller in the small town. Public and controlled markets, food department-stores, terminals, auction-sales systems, storage, and other arrangements in the large cities must be established, and located with direct reference to serving the needs of the greatest number of people. Of course it will be expensive to make such innovations, now that city properties are so completely occupied; but it must be done, and it is just as important for the city to provide such facilities as to provide parks, fire departments, hospitals, and paved streets. It must be a part of the municipal development of the future, and the present cities must prepare to adapt themselves to the situation.

All this means that there must be municipal and State systems to meet the market problem.* Trade in food products must be supervised and controlled. The transportation part of the problem is already beginning to receive organized attention. The movement to license middlemen is a beginning in this process. Inspection as to sanitary condition should be supplemented also by inspection as to regularity and efficiency of the business so far as it affects the consumer. It will not be

*See "The Country-Life Movement," page 160.

long before municipalities and States will recognize these needs and will establish market commissions with power to handle the situation. This does not necessarily mean that the public will take over the management of these utilities on a socialistic plan. It will charter corporations for particular purposes. It will unify management and undoubtedly it will limit the profits to specific percentages. It will see that reliable and unsubsidized market reports are issued. It will protect the honest and able middleman at the same time that it protects producer and consumer. The number of trustworthy middlemen is large and their business is essential.

It is specially important that the commission trader be regulated, for he receives and handles property in trust. Society recognizes that trustees must be under control. There are two essentials in the problem,—to make the commission man responsible, and to provide means of following the course of trade when necessary from the producer clear through to the consumer.

The subject of cooperation is now much in the public mind, and it is a widespread opinion that in some way it can be made to solve the market problem. Cooperative effort is only one means

of approaching the situation. Much of what is commonly called cooperation is not cooperation but co-action,—collective buying and collective selling. We have only begun to develop other ways of market control, as the finding of personal markets and the reorganization of corporation, municipal and other forms of non-cooperative action. Cooperation is a form of association, and it requires experience and practice in cooperating as well as in marketing. The cooperative movement will undoubtedly make a great contribution to the evolution of market methods, but other means and agencies must not be neglected and they will probably provide the most general relief.

THE LINE OF PROGRESS

The solution of the high cost of living lies not in meeting an irregularity or particular condition here and there: it lies rather in a radical reorganization of the methods of supplying the people with food, and this reorganization must be under the direction of experts who are employed legally by the people and who shall have power to serve the people.

But even so, I must say to you what I suggested at the beginning, that there is no solution to the problem if we mean that we must return to

former prices for the necessities of life. Those prices are gone forever. We have passed into a new stage of social evolution. Too many new and satisfying things have come within our reach, as the result of the application of science and ingenuity, to make it possible for us ever to go back where we were. But with the increasing resources at our command, it is all the more necessary that we control both ourselves and the agencies that serve us.

XXIII

THE STUDENT-LABOR PROBLEM

Rural New Yorker, May 27-June 10, 1911

THERE has been much discussion in the journals in the past two or three years touching the problem of student labor. There seems to be some complaint that students from the colleges of agriculture do not give satisfaction when they work on farms. On the other hand, there are farmers who have derived much satisfaction from student labor. The probability is that the same student would not give equal satisfaction with two classes of employers. I am convinced that there is a general misunderstanding of the student-labor problem, and I desire to make some suggestions toward setting the matter right.

THE FUNCTION OF A COLLEGE OF AGRICULTURE

It is commonly charged that a college of agriculture teaches a student the theory rather than the practice. The necessary purpose of a college of agriculture is to teach the theory, or the under-

lying reasons. This is the purpose of all colleges. There is no other way whereby a person can get the theory quickly and systematically. All good progress depends on a clear conception of the fundamental facts and the theory. One must know the character of the soil, its chemical constitution, its physical relations, its germ life, and the principles that underlie its management. One must have a rational conception of the processes in plant physiology, in animal nutrition, and in the general practices of crop and animal production. He must have a grasp of the principles of mechanics as they are applied in farming implements and machinery. If he is to be a citizen as well as a farmer, he must have a basis for judgment on educational, social and economic questions.

The whole basis of the progress of industrial education is the contention that the scientific, mechanical, agricultural, and similar subjects may be as effective means of training a man's mind as are the older or traditional subjects, provided they are equally well taught. Of course a student should have hand practice in his college life. This practice is primarily for the purpose of training him to see and to understand the principles that are involved, and to fix in his

mind the subject-matter of lectures, books and classes. It cannot be said that the ordinary class-work or the practice-work is the more important, since both are essential. One is the complement of the other. The practice is the laboratory-work of the college. This laboratory-work may be performed in a room with soils or machines or plants or test-tubes or milk, or it may be performed with these or similar materials in the fields themselves.

It is the commonest notion that a student should be trained to be a business farmer by working on the college farm. This is a fallacy, and for three reasons. (1) In the first place, a college farm is not a normal farm. It is obliged to do a great many things that a farmer's farm never does. It must grow a great variety of crops and keep a great range of stock merely for illustration and exhibition; the teams must be available for class study and for showing visitors about the place, and for doing many other things that are not farming; the place must be kept polished in every part whether it is financially profitable to keep it in this condition or not. The college farm must grow such a variety of things and engage in so many enterprises that it cannot be organized as a whole into a commercial or "practical" scheme.

It must grow much material for class study rather than for market. Such a farm exists for other purposes,— as a laboratory, as a demonstration-ground, and as an area on which experiments may be made. (2) In the second place, it is a physical impossibility to teach any number of students all the operations of even ordinary farming. Suppose that an institution has 200 students (and this is now a small number for a college of agriculture) and it proposes to train every one of these students in the art of plowing. I take it that the student really cannot learn to plow unless he has at least one acre of ground; and any farmer knows that a beginner cannot become a good plowman till he has plowed many acres. This requires 200 acres of land at the outset. Let any farmer owning 200 or 300 acres of land endeavor to teach 200 students how to plow: would he be able to do any farming? If in addition to teaching these students how to plow, it were designed to teach them to run a grain drill, to become skillful with a weeder, a sulky cultivator, a one-horse cultivator, not to mention the common hand-tools, the farmer would find himself still further submerged. It would be impossible for him to bring the students and the crops together at the right time. If an institution had ten or a dozen students and a good farm

of 200 or 300 acres, and if these students were on the farm the whole year, it might be able to teach them practical operations of farming; but it would be very much better and much cheaper to put them on the farms of good practical farmers. (3) In the third place, a student cannot afford to go to college for the purpose of learning things that he ought to learn on his own farm, or on the farm of some other person. It is too expensive; it requires too much time. He would better be devoting himself to his studies and his laboratory practice.

The college should train the student in the handicraft and the manual skill of those operations that are integral parts of his regular educational work, and these are the operations that are least likely to be well taught on a real farm. Such work as the running of gasoline and steam engines, rope-tying, making butter and cheese, testing soils, picking and packing chickens, sorting and grading apples, breeding plants, feeding animals, judging cattle and crops, running incubators, shearing sheep, laying drains, spraying, grafting, pruning, planning buildings, laying out fields, testing cows, and the like, may very well be taught in an institution; they are taught not because they are "practical," but because they are items in an educational program; but all

these together do not make up training in running a farm, but are only parts or pieces of forward farm processes.

I wish to enlarge on the physical impossibility of giving students an all-round practical training in agricultural subjects. I have asked a good many farmers what kinds of practical work the student should be taught in a college of agriculture. Every farmer has given me a different list. The fruit-grower will recommend training in a different line of subjects from the stock-grower, the greenhouse man, the truck-gardener, the dairyman, or the general farmer. The kinds of work that are needed on any one farm run into the hundreds; when these are multiplied by all the different kinds of farms, they run into the thousands. It is, of course, absolutely impossible for any one institution to provide training in all these different lines; and yet many persons seem to expect that a graduate of a college of agriculture should be ready at once to take up any kind of manual and practical work that may be presented to him and to do it better than persons who have had practice all their lives. Colleges of agriculture are constantly widening the range of subjects in which practical hand work is given, and this tendency will greatly increase; but even

so, it will be impossible for any college of agriculture ever to compass the whole field of manual training in the arts of agriculture, and it should not be asked to do so.

It is strange that anyone should expect all students from a college of agriculture to be expert practical farmers when we do not expect similar experience from students of other institutions. We do not expect a graduate of a college of law to be competent to handle a case until he has read law and has been regularly admitted to the bar; or a graduate of a college of medicine to be a competent physician until he has had his hospital training; or a graduate of a college of architecture to be able to plan and construct an important building until after he has had his experience in an architect's office; or a student from a course in landscape gardening to be able to plan and develop a large estate until he has had actual experience in the practising landscape architect's office; or a student of an engineering college to be able to engage in large engineering enterprises until after he has had practice with a construction firm. Most of the students of the colleges of agriculture have had practical farm training before they have come to college, and many of these students may make at once the very best farm men; but

the student who has not had such training must expect to secure it either after he leaves the college or else by dropping out of college one or two years in his course. The place to secure real farm training is on a real farm; and this means a farmer's farm.

In these remarks I am speaking of institutions of college and university grade. They will apply in the main even to training-schools and trade-schools, although to a less extent than I have applied them here. Some of these schools are designed to give much work and training in manual and handicraft and apprenticeship skill, and they are not confronted with the problem of providing work of college standing, that shall be comparable in educational value with other colleges. The training-schools and trade-schools may devote more time to hand work; but even so, it will be very difficult for them to train any number of pupils in actual farming; their ability to do this lies in rigidly restricting the number of students and also in tying the institution up to real farms of the neighborhood. Persons cannot be trained in farm work in the ways in which they are trained in shop work.

Before closing this part of my discussion, I should call attention again to the fact that it is

not the function of the colleges of agriculture to make farmers. It is their function to educate students by means of farming and country-life subjects. What occupation the students follow in later life, is not primarily the responsibility of the institution. It is to be expected, of course, that the larger part of the students from these institutions will make farmers or will be very closely associated with agricultural pursuits; but no one has a right to expect just because a student has gone from a college of agriculture that, therefore, he should be a farmer, or that he should know all about agricultural subjects. Wholly aside from the obligation of the college itself, also, it is essential that agriculturally educated young men and women engage in many pursuits in life, for we need the influence of such men and women in all walks if we are to make a fundamental re-direction of rural civilization.

It is really remarkable that the numbers of young men who have gone from the colleges of agriculture to the farms should be so large as they are, considering the great opportunities in the commercial world and the call for men in the teaching and experimenting institutions. It is probable that the proportion of students from the agricultural colleges who now engage in

agricultural pursuits is greater than that of students of colleges of law or some other professional colleges who follow the profession or occupation for which the college stands. Statistics of 1467 former students of the New York State College of Agriculture show that above 65 per cent have gone directly into agricultural, horticultural, and dairy work, and that about 18 per cent have become teachers and officers in departments of agricultural colleges, and experiment stations, making a total of over 80 per cent that are at present engaged in agricultural work of one kind or another. This is in spite of the fact that many of the students are still young and are obliged to engage in other occupations until they can secure means to purchase a farm, and that some of them are women who are now home-keepers and teachers. The figures of former years may not apply in the future. The whole situation is rapidly changing. Probably no agencies are now more effectively stimulating sound appreciation of farm life than the colleges of agriculture.

THE OBLIGATION OF THE FARMER

The farmer, as well as the colleges, carries a natural responsibility toward the development of a better agricultural civilization. Merely to

be a good farmer is not a sufficient object in life. Even though we develop ideal schools and colleges in which agricultural training and education have an important part, the farmer himself will still carry the obligation to aid in the process of education.

If the college of agriculture supplies the student with the principles and theory, with accurate knowledge, with the outlook and the will, with the trained intelligence, and with manual skill in a good number of special operations, it is equally the duty of the farmers of the country to provide the means of supplying the necessary actual farm practice that is required to make the rising generation to be effective countrymen. I have made this argument many times,* but I wish now to bring it directly home to the farmers of New York.

There are some things that a student should know before he ever goes to college. If he is a farm boy he ought to know how to harness a horse, to plow, to plant, to harvest, and to perform all the customary operations of the farm. The farmer cannot delegate the responsibility of training his sons in these arts. After such a young man has

* See, for example, "The Training of Farmers," (1909). The Century Co.

completed his college course, he ought to be able to go directly back to the farm and execute a great deal of what he has learned. If he is obliged to seek work, he should be able to find it on any good farm that is in need of labor.

If a student is not farm-reared, he must then secure his farm practice by working on an actual farm for a year, more or less. It would be much better for him if he were to have this practical farm experience before he ever goes to college. It is necessary that he not only have knowledge and skill in the farm operations, but he should also be fully informed of the rural mind. If he does not secure the farm training before he goes to college, then he must get it after he graduates and before he takes up a farm of his own or before he expects to become a manager of a farm. In some cases, students drop out for a year of the course and secure their experience; this is often a better practice than to leave the farm training until after the end of the course. Some students get their farm practice by spending their summer vacations in this work, but this ordinarily does not produce the best results, although there are some city boys so apt and industrious and adaptable as to enable them to secure the practical side by means of vacation work.

It is to be expected that some students will be more industrious than others. Some will understand very little about country-life conditions and others will be well informed. Some will be adaptable and some will not. Others will be homesick, and many will be out of the habit of manual labor and in no physical condition at first to perform a full day's work. It is, therefore, to be expected that the students who are seeking work on farms will be of all kinds. Some of them will earn good wages at once, and some of them will earn nothing. Yet I find that some farmers expect that a graduate of a college of agriculture will be able to "hold his own" on the first day that he goes to the farm; and some of them are ready to give such a student the most difficult row to hoe.

I have said that the farmers of the country cannot escape their responsibility in the education of the rising generation of persons who are to be farmers. I mean exactly what I say. The colleges of agriculture alone cannot handle the situation. Every good farm is not only an object-lesson, but it ought to contribute something toward the advanced training of at least one young man in agricultural lines. We must have enough farmers with public spirit to provide the

farm-training that the educated man must have; and the farmer must feel that he is under responsibility to cooperate with the colleges and schools to help the student. I do not mean that he shall be a philanthropist in the ordinary sense, but he must recognize the fact that even though a student may not be skilled in every particular and may not earn much wages, he is bound to teach such student, if he takes him, to the best of his ability. This will do much for the farmer as well as for the student.

In parts of the Old World farmers take students as apprentices, the student paying the farmer what it is worth for the privilege and for his counsel and direction. I wish that such a practice were developed in this country for those persons who are wholly unfamiliar with farming operations, and who want to do the actual work. But I also wish that farmers were more ready to take one or two students, when they are able to do so, and to give them counsel and advice and to help them to learn the business, and then pay the student what he earns. A good many of the students will earn a man's wages at once; but it is not right to expect that a student should be compelled to work only as an ordinary farmhand with no help or sympathy or instruction from the

farmer himself. I would not have any farmer take a student until he feels that he is able to do so; but I want to make an appeal to the farmers of New York State to help the College of Agriculture to train its men.

AN APPEAL TO THE FARMERS OF NEW YORK

This spring we have issued a letter to 596 selected farmers in New York State asking their cooperation in work of this kind. Out of this number relatively few farmers replied, possibly because the letter itself was not sufficiently explicit. We have great difficulty in finding suitable farms on which we can place students. Some of these students desire to earn money to help themselves through college, and some of them desire experience of farm life. Our experience with farmers indicates that they do not want students chiefly because they fear that students will not make good hired men, and will not do as much work as other laborers. I know that students have not always fulfilled what was expected of them, and some of them may not have deserved much help; but, on the other hand, some of our earnest students complain of the treatment they have received from farmers. My contention is that we need a new point of view

on the part of farmers as well as on the part of students and others. A good number of farmers in the State have taken students year after year and have found the experience on the whole to be valuable and helpful to themselves; and the students are fully appreciative of the help they have received. One farmer writes, "We have had student helpers for seven summers and they were a source of joy to us." It is always an advantage to a farm family to have a bright energetic young man in the home for a time, bringing in a different set of ideas and a different point of view on life.

Following is the greater part of the letter that we sent:

We are addressing to you our third annual letter concerning student help for summer work. The State College of Agriculture wishes to maintain a permanent list of the best managed farms in the State manned by fair-dealing men, where we can place young men who want experience and who at the same time need to earn something to apply on their college expenses. We believe these students to be strong, rugged fellows, ready to work. They are not working at agriculture because they cannot find something else to do, but because they intend to make farming their life work. They will expect to be paid what they are actually worth. Farmers who permit their names to appear on

our lists will not be obliged to take men, but will be given the opportunity to do so; it is assumed, however, that they will expect to take them if we can meet their needs. Only such farmers will be listed as are approved by the College as qualified to take young men who are learning. They will help the students to get their education and in return should receive good value. The service and responsibility will be mutual. These farms will constitute a practical department of the College of Agriculture. To have one's farm on the list will carry some distinction with it.

The young men who will be available for employment on such farms fall into four general classes:

1. Persons who expect to study at the College of Agriculture, but who want to gain a practical knowledge of farming before they enter. They are available more or less throughout the year. They are usually young men from cities who wish to become farmers.

2. Students who want summer work chiefly for experience, but also to earn what they can. Usually they have had some farm experience, but not much; but owing to their eagerness to learn they will be different from the ordinary "inexperienced hand." These students can take work about June 10th, and can continue until about September 15th.

3. Students experienced in farm work who desire places for about the same period as above in order to earn money to enable them to continue their studies at College. They will possess technical knowledge of certain kinds of farming and should prove much more efficient than the ordinary "experienced hand."

4. At the close of the college year there are usually a number of students who have finished their studies and desire positions on farms as superintendents or managers.

Your farm has been included in our preliminary list. Please state which of these four classes of students, if any, you would prefer. Please state also the kind of farming you are engaged in. As our list must include many farms of each kind, as general, poultry, fruit, dairy, and the like, we may not be able to furnish you help every summer.

If you have had student help, we should like a statement as to whether it was satisfactory.

I have felt it my duty to put this subject squarely before the people of the State in order that they may know that the responsibility for a more highly developed country life depends on them as well as on the institutions that the people have established (a situation that many farmers already realize). These institutions have their limitations, which the institutions themselves recognize; but it is impossible for them to do their work alone. The farmers must recognize their part in the work; I am now suggesting an opportunity for volunteers.

I think that farmers do not sufficiently realize how much they have to contribute, or how important their farms are educationally. Every

good farm has many of the elements of a good school. If the college has much to give, so has the farm much to give, and the farm is making a very real contribution to society. It is of the first importance that as many students as possible come in actual contact with good farms and active farmers.

I would not imply that farmers do not cooperate. I have been much pleased with the way in which they have responded to college work and with the many helpful suggestions that they are making to us. We could not do our work if this were not true. But the demands on the college are increasing so rapidly and heavily that I am making an appeal for further help.

XXIV

SOME EARLY AGRICULTURAL LEGISLATION IN NEW YORK; WITH PARTICULAR ALLUSIONS TO THE FAIRS*

Western New York Horticultural Society,

Dec. 12, 1912

THIS time I ask you to take a brief retrospect. It is good for us now and then to get an historical view. It gives us perspective. We see the route by which we have come. We make comparisons along the way. Perhaps we shall discover misdirections. We may get suggestions of new lines of action.

It was in this spirit that some years ago (1905) I took you on an excursion into the history of this Western New York Horticultural Society; and I thought that I pointed out some of the directions through which we have arrived. But that is all forgotten now, and my history has only historical value. Probably the present venture will be equally harmless.

* Some of this history is taken from the author's chapter in vol. IV of the *Cyclopedia of American Agriculture*.

THE BOARD OF AGRICULTURE

We think that all our agricultural education is of the present, but a good part of it is of the past. Before most of us were born there was much demand for agriculture in the common schools, and agitation for colleges of agriculture. The first organized educational movements were not for great State institutions, but for voluntary self-propelling agencies in the localities. The leadership and general control were to be in a central representative body of men. In his speech to the Legislature on January 27, 1818, Governor DeWitt Clinton gave first attention to the agricultural interests of the State. He advised the organization of a board to have charge of these interests, and suggested that a professorship of agriculture be connected with the board or with the University of the State of New York. In subsequent speeches to the Legislature, Governor Clinton also dwelt on the importance of aiding agriculture in an educational way, chiefly through a Board of Agriculture and societies. The phraseology of his recommendation of 1818 is as follows:

“If not the exclusive duty, it is certainly the peculiar province of the State governments to superintend and advance the interests of agriculture. To this end, it is advisable to constitute

a board, composed of the most experienced and best-informed agriculturists and to render it their duty to diffuse agricultural knowledge; to correspond with the county societies; to communicate to them beneficial discoveries and improvements; to introduce useful seeds, plants, trees and animals, implements of husbandry, and labor-saving machines; to explore the minerals of the country, and to publish periodically the most valuable observations and treatises on husbandry, horticulture and rural economy. The county societies ought to be enabled to distribute adequate premiums; and a professorship of agriculture connected with the board or attached to the university, might also be constituted, embracing the kindred sciences of chemistry and geology, mineralogy, botany and the other departments of natural history. By which means a complete course of agricultural education would be taught, developing the principles of the science, illustrating the practice of the art, and restoring this first and best pursuit of man to that intellectual rank which it ought to occupy in the scale of human estimation."

On the 7th of April, 1819, an act was passed "to improve the agriculture of this State," and \$10,000 was appropriated for the purpose for each

of two years, to be distributed among the several counties by means of a society, the State to contribute, within limits, an amount equal to what societies would raise by voluntary subscriptions. These several agricultural societies were empowered to elect officers among practical farmers whose duty it should be "annually to regulate and award premiums on such articles and productions as they may deem best calculated to promote the agricultural and manufacturing interests of this State." It was further provided that each person receiving a premium for any agricultural product should, before receiving the amount of the premium, make a full description of the methods that he had employed in producing it and deliver this description to the president of his society. The Board was to purchase and distribute "such useful seeds as they may deem proper." The presidents of the several agricultural societies, or delegates chosen by such societies, constituted the Board of Agriculture, which should meet annually at Albany, and there receive and examine all such reports and returns from the various societies and choose such as were deemed worthy of publication. The Board was to publish a volume "to be distributed, by means of said agricultural societies, to the good

people of the State, not exceeding 1,500 copies of such volume." The Board of Agriculture was organized in January, 1820; and in that year the Legislature extended the work until 1825, when it expired by limitation.

This Board of Agriculture published three thick and excellent volumes bearing the dates of 1821, 1823, and 1826. The first volume was devoted mostly to a very interesting and suggestive treatise "on the principles and practice of rural economy," rather than to collect the miscellaneous addresses that had been delivered at the various county organizations. This treatise was by G. W. Featherstonhaugh of Duanesburg; and in it he suggested what has been said to be the germ of a soil-survey idea. The book also contains an address by James Madison, late President of the United States, together with extracts from Washington's correspondence on agricultural subjects. Volumes 2 and 3 contain the general type of miscellaneous matter that originated in the county societies or that was collected from responsible sources. The three volumes comprise altogether an excellent portrayal of the agricultural and rural conditions of that epoch in the Empire State, and they should be better known to those who are studying the points of departure of con-

temporaneous rural work. The Board of Agriculture was under the chairmanship of General Stephen Van Rensselaer, which insured its ability and high standing.

As an illustration of the way in which exhibitions from county societies were reported, the following extract is made, from volume 3, of the report of Benjamin Sutton, President of the Seneca County Agricultural Society, indicating that information actually was secured as to the conditions under which the premium exhibitions were grown; and it is interesting to note also that in this case premiums were awarded to whole acres or half acres of crops rather than to selected or accidental specimens:

ONE ACRE WHEAT — FIRST PREMIUM

Raised by Col. R. Coover of the town of Coover

This crop was raised on a clay loam, stiff sward, ploughed three times. The seed furrow was given about the middle of September, and the seed sowed on the 18th, one bushel to the acre, and dragged in.

Produce, 40 bu. 9 lbs., at 8s.....	\$40 15
Three ploughings.....	\$4 50
Sowing, dragging, and seed.....	1 50
Harvesting and threshing.....	4 00
Use of the land.....	3 00
	13 00
Net profits.....	<u>\$27 15</u>

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ONE ACRE WHEAT — SECOND PREMIUM

Raised by Mr. Benjamin Sutton of Romulus

This crop was raised on a stiff clay; 20 loads of dung drawn out in the fall, and spread in the spring; broke up in June, crossed in August, and again crossed and seeded on the 15th of September.

Produce, 34 bu. 8 lbs., at 8s.....	\$34 13
Use of the land.....	\$2 00
Seed.....	1 00
Drawing out the dung.....	4 00
Ploughing three times and seeding....	4 00
Harvesting and threshing.....	4 00
	15 00
Net profits.....	\$19 13

ONE ACRE CORN — FIRST PREMIUM

Raised by Mr. Cornelius Van Horn of Romulus

The soil on which this crop was raised is a black vegetable mould (or what in this country is generally termed muck), incumbent on a stiff clay. It had lain nine years in pasture. The sod was turned neatly under in April; dragged with the furrow; scored into checks of about 32 inches each way, and planted in hills. It afterwards received ordinary attendance with the plough only, care being taken not to disturb the sod, which remained untouched until the crop was harvested. The corn was planted the middle of May.

Produce, 118 bu. 29 lbs., at 3s.....	\$44 44
Use of the land.....	3 00
Net profits.....	\$41 44

The corn fodder is made an offset for raising and harvesting the crop.

ONE ACRE CORN — SECOND PREMIUM

Raised by Mr. R. Coover of Coover

Produce per acre, 106½ bu., at 3s.	\$39 94
Use of the land.	3 00
Net profits.	\$36 94

Stalks and husks supposed to be worth the expense of raising and harvesting the crop.

The above acre of corn was raised from ground which had remained 15 years in meadow: soil, a clayey loam. It was ploughed early in the spring, as soon as the frost left the ground: a deep furrow, neatly turned over, and rolled down. Before planting, it was well pulverized with the harrow; marked into checks of 3½ feet each way; planted on the 12th of May, and dressed with the plough and corn-harrow, in such manner as not to disturb the sod.

ONE ACRE OATS

Raised by Mr. R. Coover of Coover

Produce from one acre, 77½ bu., at 2s.	\$19 38
Ploughed once.	1 25
Seed, sowing and dragging.	88
Harvesting and threshing.	3 00
	5 13
Net profits.	\$14 25

Ground a clayey loam; corn stubble, ploughed once; sowed on the 10th May, 1½ bushels seed per acre.

EARLY AGRICULTURAL LEGISLATION 221

ONE ACRE BARLEY

Raised by Mr. A. D. Schuyler of Romulus

Amount of produce, $45\frac{1}{2}$ bu.	\$25 59
Use of the land.	\$2 00
Ploughing and dragging.	1 50
2 bu. seed.	1 13
Harvesting and threshing.	3 50
	8 13
Net profits.	<u>\$17 46</u>

Soil a black loam, corn stubble. Owing to a succession of rainy weather, was not sowed until the 20th May. Ploughed once, and harrowed in. It was cut with the naked scythe, raked into winrows, and carted into the barn like hay.

HALF AN ACRE POTATOES

Raised by Mr. A. D. Schuyler of Romulus

Amount of produce, 173 bu., at 2s.	\$43 25
Use of half an acre ground.	\$1 00
Carting 20 loads dung.	1 00
Seed, 10 bu.	2 50
Ploughing and planting.	1 50
Dressing and harvesting.	3 00
	9 00
Net profits.	<u>\$34 25</u>

Soil, black loam, wheat stubble. Carted on, at the rate of 40 loads of long dung from the barn yard per

acre; spread and ploughed it under while wet; dragged it smooth, and run it into furrows of about three feet apart; dropped the seed into the furrows from 10 to 12 inches asunder, and covered with the plough back-lashing. I selected fair seed, and cut them generally into about four pieces. The ground was too low for a large crop. A small knoll, of about four rods, yielded at the rate of 600 bushels per acre.

HALF AN ACRE FLAX

Raised by Mr. David Brooks

Amount of produce from half an acre, $380\frac{1}{4}$	
lbs., at 8d.....	<u>\$30 42</u>

Amount of charges not accurately ascertained — supposed to be nearly the value of the crop.

The ground, a black loam, corn stubble, was ploughed once, and completely pulverized with the drag before sowing, and afterwards covered with the drag: about one and a half bushels of seed per acre.

In closing the labors of this Board of Agriculture, the general committee made a retrospect of its work and a comment on the agricultural conditions of the period as an introduction or preface to volume 3 of its report. This brief retrospect indicates the kind of public movements that were then in mind for the direction and improvement of agricultural affairs. It was in part a plea for the application of scientific facts

to the practice of agriculture, particularly those facts and inferences that had arisen from the study of chemistry. The members realized that they were at the beginning of a new era. It was said that in New England three schools had been established within the preceding three years to teach science to youth who were destined to follow agriculture and the arts. A professorship of agriculture had been attached to the new college at Hartford, Conn.; and the Legislature of Massachusetts had under consideration a bill to establish an agricultural college in that commonwealth. It was stated also that in New York a school had been established with like views by the president of the late Board of Agriculture, and that it was in a flourishing condition. I assume that this reference is to the establishment of the Rensselaer Polytechnic Institute at Troy, which was founded by the Hon. Stephen Van Rensselaer in 1824. Mr. Van Rensselaer outlined his purpose in this school as follows: "I have established a school at the north end of Troy for the purpose of instructing persons who may choose to apply themselves in the application of science to the common purposes of life. My principal object is to qualify teachers for instructing sons and daughters of farmers and mechanics, by lectures

or otherwise, on the application of experimental chemistry, philosophy, and natural history to agriculture, domestic economy, the arts and manufactures." It was understood also that a similar school would soon be established in Madison county.

THE STATE AGRICULTURAL SOCIETY

After the discontinuation of the Board of Agriculture, following widespread discussions an "agricultural State convention" was held at Albany in the year 1832. As a result of this convention the New York State Agricultural Society was organized and was incorporated by the State, it being apparently an outgrowth of the earlier movement. It retained the method of the Board of Agriculture in distributing State funds to the counties through their societies. The State Society followed a precarious existence for some years. In 1841 it was reorganized and the constitution was revised and, with State aid, provision was made for an annual "cattle show and fair." The act of 1841 (which followed in general plan the act of 1819 establishing the Board) provided that when any county agricultural society should raise by voluntary subscription any sum of money, the State should con-

tribute to the society an equal sum, but not, however, exceeding the amount to which such society should be entitled by the regular allotment to each county as provided in the bill itself. The New York State Agricultural Society and the several county agricultural societies were to elect annually such officers as they might deem proper, and it was the duty of such officers annually to regulate and award premiums on such articles, productions and improvements as they might deem best calculated to promote the agricultural and household manufacturing interests of the State, having special reference to the practical value and profits of such articles, productions or improvements, "with the intention that the reward shall be given for the most economical or profitable mode of competition." It was further provided that before any premium should be delivered, the person who was to receive it should deliver in writing to the president of the society an accurate description of the process in preparing the soil, manuring, raising of crop or feeding the animal, as well as the expense and the product of such crop, or of any increase in the value of the animal, "with the view of showing accurately the profit of cultivating the crop, or of feeding or fattening the animal." It is apparent,

therefore, that the underlying idea of the county society organization, both in this enactment and in the law establishing the old Board of Agriculture, was distinctly and directly educational; and that it was not the intention to make mere displays.

The first report of the New York State Agricultural Society was published in 1841. This volume contains, aside from other interesting matter, the reports of the various county agricultural societies, in which reports were statements on the growing of the products and profits of the different agricultural materials that received premiums. The valuable reports of the State Agricultural Society were published annually until 1871, and during a part of that time the Society published a journal. The reports for 1872-76 were contained in one volume, as well as those for 1877-1882, and 1883-86. After this, annual volumes were published, one of these being the semi-centennial volume of 1890. During all these years the Society had held its annual Fair and had maintained its relations with the county agricultural societies. The first fair under the reorganized society was held in the "Village of Syracuse" in 1841. In 1889 the fair was located permanently at Syracuse, it having been held in

the meantime in various places from Rochester and Watertown to New York city.

The Society maintained its regular existence and held fairs until and including 1899. In January, 1900, action was taken for the establishment of a State Fair Commission and the taking over of the State Fair by the State of New York. The State purchased the property of the Society at Syracuse and took over its obligations. The report for 1899 is the last regular volume of the Proceedings of the Society, it having existed for sixty-eight years and having published annual reports for about sixty years. The county fairs were disconnected from the organization handling the State Fair, and their moneys were made disbursable through the State Department of Agriculture, a department that had been organized in 1893 out of the old Dairy Commission. Although the present distribution of the county fair money is for the "promotion of agriculture and domestic arts" and "education along agricultural lines," the original provisions for the control of exhibits are no longer specified.

How successful the county fairs of the old Board of Agriculture really were, of course I do not know; nor do I know how the fairs of the

present day compare with those of the middle part of the last century; but I am interested in the plans that were made at the beginnings.

The one function that remained to the State Agricultural Society was the trusteeship in Cornell University, that was held *ex officio* by the president of the Society. The Society was maintained but without general public meetings, and its president has continued to be a trustee of the University and a partaker in the development of the New York State College of Agriculture. In 1910 the Society was practically reorganized as a voluntary discussion association. A meeting was held under the call of Raymond A. Pearson, then Commissioner of Agriculture, in the State Capitol, January 18-20, 1910. The report of the discussions was published as Bulletin 14 of the State Department of Agriculture. Two subsequent meetings have been held and publications have been made. The Society is now under the active presidency of George W. Sisson and it has taken up definite lines of discussion as well as to provide a free meeting-place for all the agricultural interests of the State.

COLLEGES OF AGRICULTURE

From the first the educational motive seems to have been dominant in the old Board of Agricul-

ture, and also in the State Agricultural Society, at least throughout the middle of the last century. Largely as a result of the discussions through the State Agricultural Society, legislation was early enacted for the establishment of an agricultural school or college. At the first meeting of the Society, in 1832, a committee was appointed to report on a plan for an agricultural school. This plan was reported early in 1833. It contemplated that the preliminary expense of establishing a proper school would be \$57,550, and that the annual maintenance expense would be \$23,400. The annual receipts from tuition and farm produce were conceived to be \$34,000, or a balance to the good in each year of more than \$10,000. Modern educational institutions will be envious of a plan that produced such excellent financial results.

In those days, however, schools were maintained by corporations or denominations, and were sometimes practically private ventures. The first legislative enactment for the establishment of a school of agriculture, 1836, authorized the corporation to hold, own and manage the school, and provide for subscribers to the fund. It was prohibited to receive any initial subscription of more than one thousand dollars, and it was also

provided that the incorporators should not receive more than five per cent interest on their investment. Apparently sufficient subscribers were not secured to bring the school into existence.

The State Agricultural Society continued, however, to agitate the establishment of a college of agriculture. It is said that in 1839 eighty petitions to this effect were sent to the Legislature. In 1844 "a New York State College of Agriculture" was chartered by the Legislature, but this seems not to have come into existence.

In 1849 such a college was advocated by Governor Hamilton Fish. The Legislature in that year appointed a board of eight commissioners, one from each judicial district, to investigate the subject and to mature plans for an agricultural college and experimental farm. In 1850 the commission presented its report. In 1853 the Legislature granted a charter for "The New York State College of Agriculture." The trustees were authorized to receive proposals for the capital stock of the institution, and these were proposed to be distributed in shares of \$50 each. The College was established in Fayette township, Seneca county; but owing to the death of its president, John Delafield, on the 22d of October, 1853, the project came to an end.

In 1856 the Legislature authorized a loan to an agricultural college at Ovid, in Seneca county. This loan amounted to \$40,000, and was on condition that the trustees raise a similar amount. After much discussion, a farm of 686 acres was purchased at a cost of upwards of \$45,000, or more than the entire State loan. Possession was taken of this farm by the trustees on April 1, 1857. The corner-stone of the building was laid July 7, 1859. The college opened December 5, 1860, with 27 students. The coming on of the Civil War brought the college to a close the coming year. The trustees asked the Legislature for an annual appropriation of \$5,000 for five years to keep the institution alive, but this request was refused. The State held a mortgage on a part of the property, and the remainder of the property was sold by the sheriff. The old building is now a part of the Willard State Hospital for the Insane, which was established in 1866.

At this time there arose more or less organized national discussion for colleges of agriculture and mechanic arts. This culminated in the passage of the great Land-Grant Act of 1862, in which citizens of New York State played a prominent part. The history of the People's College at Havana (now Montour Falls) and the subsequent

county movements need not be detailed at this time. It is enough to say that the State finally established a State college of agriculture by an enactment signed by Governor Odell, May 9, 1904, and the first regular maintenance appropriation was made and the Administration Act was passed by the Legislature of 1906. In 1897 the buildings were dedicated by Governor Hughes. The State has established other institutions for agricultural education, and it maintains the previously organized State Experiment Station (established 1882), the State Department of Agriculture, and the State Veterinary College (1896). It also continues its appropriations to the State Fair and its distribution of moneys to the county or local fairs.

SOME QUESTIONS ABOUT THE FAIRS

Many suggestions might be drawn from the foregoing history. It represents a continual struggle to establish educational agencies for agriculture, exhibitions or fairs being one of these agencies. Private and local "colleges" of agriculture sprang up. The State lent itself to the enterprise; but it was not till the colleges in Michigan and Maryland were established in the fifties that the proper procedure was found. Then there came the long development of the

mechanical trades, the opening of the vast West, and the world-growth of cities; and the agricultural institutions were in eclipse. But now the time is ready and ripe. We have our colleges and schools; a new spirit has entered the public school work; the people are ready in their support of research in agriculture. The agricultural police work of the State has come to be a strong arm of government. But the small fairs, which the old Board of Agriculture and the State Agricultural Society were to regulate and promote, still remain educationally undeveloped. So completely are they likely to be controlled by an organization (and sometimes so much handicapped by incumbrance) that they are often not adaptable to radical change. The people have come to accept them as occasion for a holiday and opportunity to visit, perhaps not thinking that they might be made to serve many other purposes in addition to these; or if innovations are accepted, they are merely added or attached to the old type of establishment. The fact that the people patronize them and like them is no indication that they serve the most useful purposes. Of course, the ultimate responsibility lies with the people themselves, and it is to energize public sentiment that I am now making these statements.

Some two years ago* I pointed out what I thought to be some of the deficiencies in county and local fairs on the exhibition side. I want now to ask whether they may also be improved on the organization side.

I am not finding fault with the fairs and I am not an antagonist: I am wondering, and I want to ask some questions. I am wondering whether we are getting the best results in efficiency and how we may all turn in to help. I know that fairs are taking on new work; I know that many of them are most useful; I know that able and devoted men and women are working hard for them and deserve the gratitude of their fellows; no doubt the agencies connected with the fairs are carrying their parts well; I know that real changes come hard: but, after all and in general, are the fairs indispensable? Are they worth the money that is expended on them?

Is it worth while to have an agricultural fair for any other purpose than to educate the people? If trade is desired, are there other and more effective means of advertising goods and towns? What real reason is there for a fair in a locality except to aid in developing and improving that

*See "The Country-Life Movement," p. 165 (1911). The Macmillan Co.

locality? If entertainment alone is desired, are there other and better means of securing it? Should a fair express the best there is in any locality or region, in products, in methods, in institutions, in recreation, in affairs, in initiative, or should it be merely an exhibition? Do the county fair organizations usually really represent the counties? Do we need to approach the subject in a new way in this twentieth century? And if so, do we need a new type of organization and control? Have we confused an agricultural fair with an exposition?

Should any State appropriate money to local fairs unless the fair is effective for the locality — not merely as a display but as a constructive agency—and unless the locality itself by vote of the people or their representatives contribute to the expense? If the State contributes to the fairs, should there be a State policy or program? Should an expert fair man be given authority by law, under proper auspices, to direct the work of all such organizations, as experts are connected with the educational and police work of the State? Should the receiving of State money in any locality be conditioned on regulations touching the organization and underlying management of the fair? Is it sufficient merely that immoral

and gambling exhibits and devices be eliminated? Should the State fair maintained by any commonwealth and all the local fairs receiving State aid be associated into one related enterprise, as an organ for the general good? And should these fairs be co-ordinated with other State agencies? Is it either good policy or good economy to maintain fairs as wholly detached or unrelated enterprises? Would it be possible or useful to have public and popular county societies to discuss actively the rural conditions of the counties, with a fair as one of several pieces of work? Do we have the suggestion for such societies, and also the funds to aid in founding them, in the present distribution of State moneys?

Should the fair organization be always active, and cooperating with the school and other agencies? Should there be continuous preparation for the fair throughout the year? If exhibits are chosen largely at random and because they are biggest or finest, do they really teach any lesson, even though they are good in themselves? Is it possible to collect information at the same time that we collect exhibits? Are the farmers in the localities really exhibiting their products at the fairs? Should the demonstration of such products be the dominant note in an agricultural fair?

Have any of the fairs become town shows, maintained by the public spirit of the village or city because they contribute to trade? Do the actual rural people take much effective part in the management of them? Does it ever happen that the gift of State money tends to solidify and intrench a small organization or group rather than to stimulate the people? If any re-direction in organization is desirable, is the suggested State regulation a practicable means of beginning the process?

Is it possible to devise any background organization that shall assemble the forces of open country and of town and State into a united effort to bring the fairs into an organized State educational plan and to make them a forward arm of the public service?

XXV

THE SURVEY-IDEA IN COUNTRY- LIFE WORK

*Training Conference for Rural Leaders, Cornell
University, July 26, 27, 1911*

IT is commonly understood that there is a positive national problem lying in the present condition of country life. Rural affairs are not sufficiently represented in the voice of the people. The domination of national policies lies with the cities or with the types of associate and corporate interests that center chiefly in the cities, and that tend to exploit or at least to overlook the open country.

Many processes are suggested for the general regeneration of rural affairs. Each of these processes has its strong advocates. The tendency is to project many separate processes or methods which, although they may all be excellent in themselves, tend to separate into divergent and unrelated lines of effort. We are not to hold that only one way of attacking the rural problem is fundamental and that others are unimportant.

Perhaps every method that has been suggested is essential. But whatever the means and movements, the scientific method must prevail. The scientific method is *first to determine the exact facts, and then to found the line of action on these facts.* This is the way in which all problems must be attacked if real and permanent solutions are to be found. The scientific method in engineering and mechanics and biology and the rest has been responsible for the high development of civilization within the past century. Similar methods must be applied in rural work. We must finally found all our progress in rural life on a close study of the facts and the real elements in the situation, in order that we may know exactly what we are talking about. The prevailing political methods have been the antithesis of this: they have been too often the methods of opportunism.

A movement to collect such facts is now just beginning to appear. It is generally spoken of as "agricultural surveys." While there have been geological surveys, soil surveys, and studies of particular phases of the rural situation for many years, nevertheless the consciousness that the entire situation must be studied in all its relations has only recently begun imperfectly to take hold of the public mind.

THE CORNELL CONTRIBUTION

In this address I am not to give an historical review of these surveys or to estimate the many contributions that have been made to the idea. I plan only to answer the question, so often put to me, as to what Cornell University has done and also what is my own conception of the agricultural survey problem.

At Cornell the survey-idea began to take shape more than twenty years ago. It was really begun with a piece of work in 1890 that culminated in the publication of Bulletin 19, "Report upon the Condition of Fruit-Growing in Western New York." On the passage of the Experiment Station Extension Bill, or "Nixon Bill," in 1894, a definite program of exploration of the horticultural industries of the State was begun, resulting in publications such as "Impressions of the Peach Industry in Western New York," "The Cultivation of Orchards," "The Geological History of the Chautauqua Grape Belt," and others.

In the first report on this "extension work in horticulture," for 1895, the writer made the following statement: "Another type of research work which we have undertaken under the auspices of this bill [the "Nixon bill," applying to the fifth judicial department of the State] is the

investigation of the conditions of certain horticultural interests in western New York. In the interest of these particular inquiries, we traveled no less than 25,000 miles in western New York and have visited and examined many hundreds, if not thousands, of plantations. We have attempted in these investigations to learn the actual state of the industries and to suggest means for their improvement. They are really the beginning of a horticultural survey which can be much extended with great profit." In the second report, for the year 1896, it was said: "The animus of the entire enterprise has been an attempt to inquire into the agricultural status, to discover the causes of the rural depression, and to suggest means for improving the farmer's position. This attempt has been specifically directed to a single great branch of rural industry, horticulture, in pursuance of the provisions of the law; but what is true of the horticultural communities is essentially true of other agricultural regions, and, moreover, these two types of agricultural industry cannot be separated by any arbitrary lines. The work, therefore, has practically resulted in a broad study of rural economics. We conceive that it is impossible really to extend the Experiment Station and University

impulse to the people in such manner that it shall come to them as a living and quickening force, without first studying the fundamental difficulties of the farmer's social and political environment."

The efforts in these early days, however, were necessarily confined mostly to work with crops and with schools; but the ultimate purpose — to determine the real basis of rural life — was clearly in mind in the direction of the work.

The work in communities gradually took on larger meanings. It was desired to "round up" an entire subject in a region, and to get its full significance. The horticultural survey work finally culminated in the excellent apple-orchard surveys of Wayne and Orleans counties, by G. F. Warren, under the direction of Professor Craig (Bulletins 226 and 229, in 1905). I think it not too much to say that these surveys marked a departure in this kind of work, substituting the statistical method for previous means. Orchard after orchard was studied in person by Warren, and the financial and farm-management phases of the situation were reported with care; and in the Wayne survey the horticultural condition was articulated as far as possible with the geological horizon.

Other surveys of this general character have been made, and one of them has been published,

1910, as an "Apple Orchard Survey of Niagara County," under the direction of Professor Craig;* and a correspondence survey, under direction of Professor Warren, was published in 1909 as "The Income of 178 New York Farms." Other publications will follow.

The results of the statistical work in Wayne and Orleans counties were so striking that it was then proposed to apply the method to farming in general rather than to a single crop or product. In 1906, under Professor Hunt's immediate direction, a survey was planned of Tompkins county, the seat of the New York State College of Agriculture. It was found at the close of the first season's work that it is impossible, in practice, to cover all or even a large part of the rural situation in any region by going over it once; and the Tompkins county work was narrowed to a farm-management survey,—that is, "to find the profits for the year on each farm, and to find what conditions and types of farming result in the largest profit or labor income; in other words, to find why certain farms pay better than others." The results of this survey, published in 1911 as Bulletin 295, under the leadership of Professor

*Subsequently "An Apple Orchard Survey of Ontario County," under direction of the late Professor Craig, has been published.

Warren, make a distinct contribution to the country-life movement; and, so far as we know, they represent the most complete census-taking of its kind that has yet been undertaken. The bulletin is a document of nearly 200 pages, replete with carefully secured and well-digested statistics and observations on the profits and losses of Tompkins county farms, with many interesting and applicable deductions. It will become a source-book not only for its region, but for general study of the problems involved in the business management of farms.

PERSONAL STATEMENTS OF THE SURVEY-IDEA

As I am asked, on this occasion, for a personal opinion of the work and reasons involved in agricultural surveys, I may be allowed to quote statements that I already have made on the subject. In "The State and the Farmer," 1908, I made an appeal for the collecting of *complete local fact*, as follows:

A thorough-going study of the exact agricultural status of every State should now be made, and it should be made by the State itself, working through an agricultural college. Such an inquiry made carefully and without haste by men who are thoroughly well prepared, and continuing over a series of years, would give us the data for all future work with local

problems. We must have the geographical facts. We are now lacking them. We talk largely at random. We must discover the factors that determine the production of crops and animals in the localities, and the conditions that underlie and control the farm life. Consideration of these conditions involves study of local climate; knowledge of the kinds, classification and distribution of the soils and the relation of place and altitude to production of crops and live-stock; determination of the best drainage practices on various soil types; consideration of the cultural experience and manurial needs as adapted to the types; inquiry into the practice with all leading crops and products of the localities; study of the possibilities for farm water-power; collation of community experience. Such a study of a State should be broad and general enough to consider the status of all the agricultural industries in the State, and it should also take full cognizance of educational and social conditions.

This constitutes the greatest need of practical farming at the present day. The agricultural institutions are working out the principles, but they may not be able to apply these principles to individual farms because they do not know the exact local conditions. The farmer himself may not know the principles, nor even the local facts. The result is a lack of articulation between the teaching and the practice. Farming is founded on the facts of the locality: no business can hope for the best success until it has exact knowledge of its underlying conditions.

These kinds of inquiries are now well under way in the form of "surveys" of many kinds, proceeding

from the colleges of agriculture and the United States Department of Agriculture. The studies of larger range, that purpose to compare general agricultural conditions in the whole national domain and to standardize our knowledge of them, may well be undertaken directly by the national government; but the commonwealth itself should give itself the advantage of making inquiries into its own agricultural conditions. The survey work of the institutions will be greatly perfected in the next few years, and we may expect to see great public funds devoted to it. The survey parties will comprise strong, all-round men. No small part of the value of such surveys will be the discovery of great numbers of earnest, competent men and women on the farms who may be made local leaders, and the recognition that it will give to good agricultural practice everywhere. Every thorough survey should be the forerunner of new ideals for the communities, and of new points of crystallization of local effort. It should make new paths.

I later made another brief statement as follows in "The Country-Life Movement," 1911:

The taking stock of the exact condition and materials of country life is immensely important, for we cannot apply remedies before we make a diagnosis, and an accurate diagnosis must rest on a multitude of facts that we do not now possess. This is the scientific rather than the doctrinaire, politics, and oracular method of approaching the subject. It is of the first importance that we do not set out on this new work

with only general opinions and superficial and fragmentary knowledge. Every rural community needs to have a program of its own carefully worked out, and this program should rest on a physical valuation. It may be some time yet before the importance and magnitude of this undertaking will impress the minds of the people, but it is essential to the best permanent progress.

STATEMENT OF THE COMMISSION ON COUNTRY LIFE

The Commission on Country Life, 1909, after having considered great numbers of suggestions from persons in all parts of the country, mentioned as the first item in its category of the most prominent deficiencies in country life in the United States, "a lack of knowledge on the part of farmers of the exact agricultural conditions and possibilities of their regions." It also stated that this lack of knowledge constitutes one of the great "underlying problems of country life." Its main statement in regard to the need of agricultural or country-life surveys is as follows:

The time has now come when we should know in detail what our agricultural resources are. We have long been engaged in making geological surveys, largely with a view to locating our mineral wealth. The country has been explored and mapped. The main native resources have been located in a general way. We must now know what are the capabilities

of every agricultural locality, for agriculture is the basis of our prosperity and farming is always a local business. We cannot make the best and most permanent progress in the developing of a good country life until we have completed a very careful inventory of the entire country.

This inventory or census should take into account the detailed topography and soil conditions of the localities, the local climate, the whole character of streams and forests, the agricultural products, the cropping systems now in practice, the conditions of highways, markets, facilities in the way of transportation and communication, the institutions and organizations, the adaptability of the neighborhood to the establishment of handicrafts and local industries, the general economic and social status of the people and the character of the people themselves, natural attractions and disadvantages, historical data, and a collation of community experience. This would result in the collection of local fact, on which we could proceed to build a scientifically and economically sound country life.

Beginnings have been made in several States in the collection of these geographical facts, mostly in connection with the land-grant colleges. The United States Department of Agriculture is beginning by means of soil surveys, study of farm management and other investigations; and its demonstration work in the southern States is in part of this character. These agencies are beginning the study of conditions in the localities themselves. It is a kind of extension work. All these agencies are doing good work; but we have

not yet as a people come to an appreciation of the fact that we must take account of stock in detail as well as in the large. We are working mostly around the edges of the problem, and feeling of it. The larger part of the responsibility of this work must lie with the different States, for they should develop their internal resources. The whole work should be coordinated, however, by federal agencies acting with the States, and some of the larger relations will need to be studied directly by the federal government itself. We must come to a thoroughly nationalized movement to understand what property we have and what uses may best be made of it. This in time will call for large appropriations by State and Nation.

To secure these results, the Commission's first recommendation is that "there should now be organized, under government leadership, a comprehensive plan for an exhaustive study or survey of all the conditions that surround the business of farming and the people who live in the country, in order to take stock of our resources and to supply the farmer with local knowledge. Federal and State governments, agricultural colleges and other educational agencies, organizations of various types, and individual students of the problem should be brought into cooperation for this great work of investigating with minute care all agricultural and country-life conditions."

THE SCOPE AND CHARACTER OF SURVEY-WORK

Surveys may be of many kinds and for many purposes. Some of them may be for temporary uses only, in the nature of explorations or to set forth a particular line of ideas. The real rural survey should be *an agency of record*; and it is this type of effort that I am now discussing.

We must distinguish sharply between such a survey, made slowly and studiously, and an inspection, a canvass, or a campaign. These lighter efforts may be very necessary, but they usually do not constitute investigation, and they belong to a different order of inquiry.

The general or gross reconnaissance, to bring together quickly for comparison the outstanding features and conditions of many communities, may have much value; but it should be undertaken only by persons of experience in detailed survey-work and of ripened judgment. It is one of the most difficult forms of survey-work, if it is to have real value. It must be much more than a car-window exercise. When properly undertaken, it is a new and useful application of geography. There is great danger that the overhead reconnaissance will be little more than practice in aviation.

If a survey of any region or phase is to be a record of fact, then it must be *strictly scientific in spirit*, as I already have indicated. It must discover and set down every fact of significance, wholly apart from any prejudice or bias in the mind of the observer: the fact is its own justification. The work cannot be as precise as that in the mathematical and physical sciences; but in its purpose it must be as scientific as any work in any subject.

If the work is scientific, then it will not be undertaken for the purpose of exploiting a movement, recruiting an association, spreading a propaganda, advertising a region, sustaining a political organization, or promoting the personal ambition of any man. There is indication that survey-work will soon become popular; there is danger that it will be taken up by institutions that desire to keep themselves before the public and by localities and States that desire to display their advantages. It will be easy to marshal statements and arrange figures, and particularly to omit facts, in such a way as to make a most attractive showing. Even some honest investigators will be likely to arrange the material in such a way as to prove a point rather than to

state the facts, unless they are very much on their guard. If country-life surveys have possibilities of great good, they also have equal possibilities of great damage. I am glad that the movement is going slowly at first.

The intention of survey-work in agriculture is to make a record of *the entire situation* and to tell *the whole truth*. Fragmentary surveys and piece-work, however good they may be in themselves, do not represent the best effort in surveys. Practically all our surveys have thus far been fragmentary or unrelated, but this is the work of a beginning epoch. We shall almost necessarily be obliged to do still further fractional and detached work; but it is time that we begin to train the imagination on completer and sounder programs. The whole basis and condition of the rural community must be known and recorded. The community must know where it stands. It must understand its assets and its liabilities.

Survey-work is legitimate *wholly aside from its application*. I have no patience with the doctrine of "pure science,"—that science is science only as it is uncontaminated by application in the arts of life; and I also have no patience with the spirit that considers a piece of work to be legitimate

only as it has direct bearing on the arts and affairs of men. We must discover all things that are discoverable and attack those that are not discoverable and make record of it: the application will take care of itself. The application of science lies not alone in its employment in particularities here and there, but quite as much in the type of mind and the philosophy of life that result from it. If we knew our exact rural status — in materials, accomplishments and deficiencies — we should by that very fact have a different outlook on the rural problem and a surer process of attacking it. We should do little guessing. We should correct many vagaries and many a foolish notion to which we now are all, no doubt, very much given. We should not be obliged to follow blind or self-wise leaders. A substantial body of accumulated fact would set bounds to the promoter and the agitator and the schemer.

The result of survey-work in agriculture should be to *tie the community together*. Such work would provide a basis for real judgment on the part of every intelligent resident of the neighborhood. One interest would be tied up with another. Apple-growing would not be distinct from wheat-growing, or church work from school work, or

soil-types from the creamery business, or politics from home life. The vicinage would be presented to the citizen as a whole. Nothing, in my opinion, would do so much to develop pride of neighborhood, local patriotism, and community common sense as a full and complete knowledge of what the community is in its resources, its history, its folk, its industries, its institutions, and its tendencies.

I am often told that we can gather all the information that is useful by surveying representative communities here and there rather than by surveying all communities,—that if we take stock of all communities we shall be endlessly duplicating. But I think that I have now said enough to put it into the mind of my hearer that *the community needs a survey for itself*. We are to build the life of every community on the fact of that community. It may not be necessary to make the same studies or even equally extensive studies in all communities; but no community should be overlooked, in the end, if we desire a correlated evolution of rural society.

When the survey-idea is once understood and begun, every locality will desire to be represented. Certain regions will develop full surveys,

and the reports will be standard; the surveys of intermediate localities may not need to be so elaborate or minute.

When we finally understand our problem, we shall make our best surveys *in consecutive order*. We may classify all phases of survey-work freely under three groups,—physical, economic, social; and the order of the surveys should preferably follow this sequence. We should first know what the region is — geography, physiography, climate, resources, soils; then what it does — the farming, the industries, the markets, the business, the profits-and-loss; then how it lives — its people, its homes, its health, its institutions, its modes of expression, its outlook.

I very much doubt the lasting value of surveys of church or school or particular crops or special products that are not founded on a good knowledge of the physical and economic conditions of the region.

HOW ARE WE TO GO ABOUT IT?

I presume that we have no models for these country-life surveys. My own philosophy of the situation has not been derived from the current social surveys of cities, and I do not know

whether their methods will apply to the rural work.

These new surveys must be serious studies on the spot rather than note-takings or correspondence. The different parts of the survey in any region must be made by different persons or parties, in a cumulative way. It is impossible to cover all subjects or phases in one survey: the investigator is not expert in all subjects; even if he were expert, he would not have time; he would tire out every respondent; and the data from very complex surveys cannot be clearly and usefully tabulated. Of course, as I have said, I should not estop any competent person or agency from making a partial and wholly independent study, but its deficiencies should be recognized.

As to detailed methods of making surveys, little need be said in an address of this kind. The success of the work will turn on the personality and training of the man who undertakes it. It must be done in person: that is, the information must be secured by personal visits and investigation. The questions in a given investigation should be few and significant. The particular survey should cover a definite subject, and every effort should be made to keep it from scattering. The tendency is to cover too much ground. It

requires time, patience and the studious temper to make a good survey. At least one experienced person should be actually in the field: it should not be left to novices and mere explorers. The person should be a real student of the subject that he proposes to survey.

To ensure the best results, the region should have good topographical and geological maps. The next step is a soil survey. The soil surveys now issue from the federal government (United States Department of Agriculture; and in New York they are properly cooperative with the State College of Agriculture). The general soil-survey is rightly a national undertaking, for there should be a uniform charting of the national domain as to soil types as well as to geological types; and classifications do not follow State lines. The States, however, may well follow with more detailed soil-surveys, based on the general charts, and relate the work directly to local practice. Undoubtedly we need to develop more uniform and comparable methods for this work; and this could be brought about by conferences or committees of those persons specially interested in the soil-survey program.

A study of the local climate ought to be a part of these preliminary surveys. We are neglecting

the climate factor. Climate is distinctly local. With soil, it determines the farming condition. The best agriculture is a careful adjustment to the climate of the district; but the collecting of meteorological data is so much a widespread governmental function that we forget the detail climates of small localities.

It is not so clear what the next step should be in the stock-taking of a region. Sooner or later, all the natural resources of the area should be carefully known. Perhaps the resources of minerals and metals and timber and streams and the like will be clearly determined in the geological and soil and farm surveys themselves; but they should all be found and recorded. The wells and water-supplies should be studied, particularly in regions of small rainfall and great evaporation. There should also be a natural-history survey of the entire wild life of the region, culminating in the publication of good local floras and faunas; but perhaps this may wait for later development. It is probable that a thorough farm-management survey would best follow immediately on the soil survey, taking inventory of the farm values, the methods of farming, the crop schemes, the incomes, the investments, the labor cost, the profit-and-loss. This implies a real investigation by

means of cost-accounting. We should know how the conditions and materials of the farms are utilized.

A farm-management survey considers farms as business units. This would probably best be followed by a careful study of the general business situation in the region, as respects markets, railroads, taxation, credit, land-tenure, labor-market, and the like. This is the field of rural economics, considering the farmer not in reference to the production of crops on his own farm, but in his business relations to his community and surroundings.

These foundation registers having been made, the various crops or products of the region may be chosen for detailed study, as the fruit crops, truck crops, flower crops, home gardens, woodlots, pastures, grain crops, new crops, milk and butter production, poultry, sheep, cattle, swine, horses, and the like. All such supplementary studies should take full account of every preceding study and endeavor to determine how far the particular industry is colored or shaped by the underlying physical and economic conditions. Every survey should articulate as far as possible with every collateral survey. It is not necessary that every survey round up and condense into

itself every preceding survey; but the person who makes the survey should have the knowledge that comes from the former surveys and he should profit by their methods.

On these bases many special and interesting studies may be projected from year to year — studies of the industries, the homes and domestic welfare, the sanitation, education, business co-operation, the possibilities of engineering development, the religious reactions, re-creation, child-study, special vital statistics, ethnological and historical studies, public relations, and the general social welfare.

These surveys will be made by many agencies. The strictly agricultural parts will naturally be accomplished by colleges and schools and departments of agriculture and by experiment stations. Societies, churches, individuals, and all agencies representing welfare will contribute and cooperate.

Every State must soon face the problem of projecting a regular program of stock-taking of its agricultural resources. If the work is effective, it must be wholly free of political methods. The value of the survey will depend on the agencies that make it, the type of organization, and the preparedness of the workers. Although I consider the survey-idea to be fundamental to

our national problem of rural development, I shall be ready to attack any promotion of it that seems to be doubtful or unsound.

FORECAST

I have now sketched a rough outline of my hope in the country-life survey. Looked at from the start, it may seem to be an ambitious program; but it will come only year by year and piece by piece, and nobody will be startled in the process. It will be fortunate if we have a clear conception at the outset of the results that are to be desired, and if our work proceeds in an orderly way. We must conceive a progressing enterprise. What we are aiming at is the record of community experience, as a guide to further action. The parts of the work eventually will aggregate themselves into a Book of the Community, which will represent all that the community has done and what it hopes to do.

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